DEADLANDS
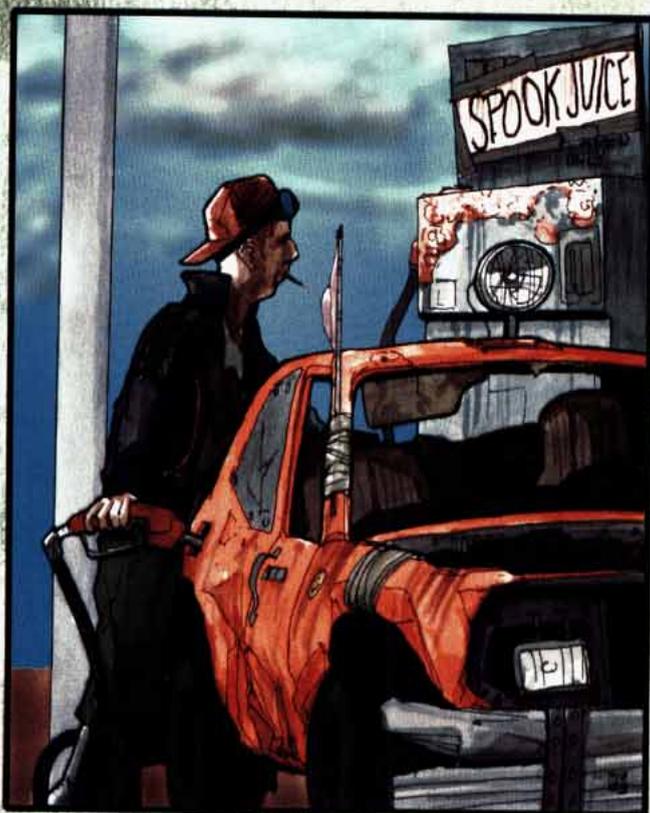
Fill 'er Up Pal...

Your heroes have been wandering the Wastes for months, ammo is running low, their ride is running on fumes, and their last hot shower is a fading memory. What are they to do? Head to Junkyard, of course—the fabled Iron Oasis: where spook juice flows like water and ammo grows on trees. Well, maybe not, but it still seems like paradise to the battered wasters who visit there.

Iron Oasis contains all the material you need to run an adventure or even an entire campaign in the city. After a good night's rest, your posse can go shopping, catch some bloodsports at the Arena, or maybe see the latest release from Movie Town. Your heroes shouldn't get too relaxed, though. Political intrigue abounds in Junkyard, and people often disappear off the city streets never to be seen again.

Besides info on the city itself, this book contains a complete set of aircraft rules for wannabe Sky Pirates that allow heroes to build and fly their own aerial mounts. There are also rules for equipping your waster with bionic parts. Whether your hero needs to replace a body part lost to some abomination, or simply feels the need to be better, stronger, and faster, it's all in here.

So, if your weary hero needs to take a break from the Wastes, grab a copy of *Iron Oasis* and head to Junkyard today!

DEADLANDS

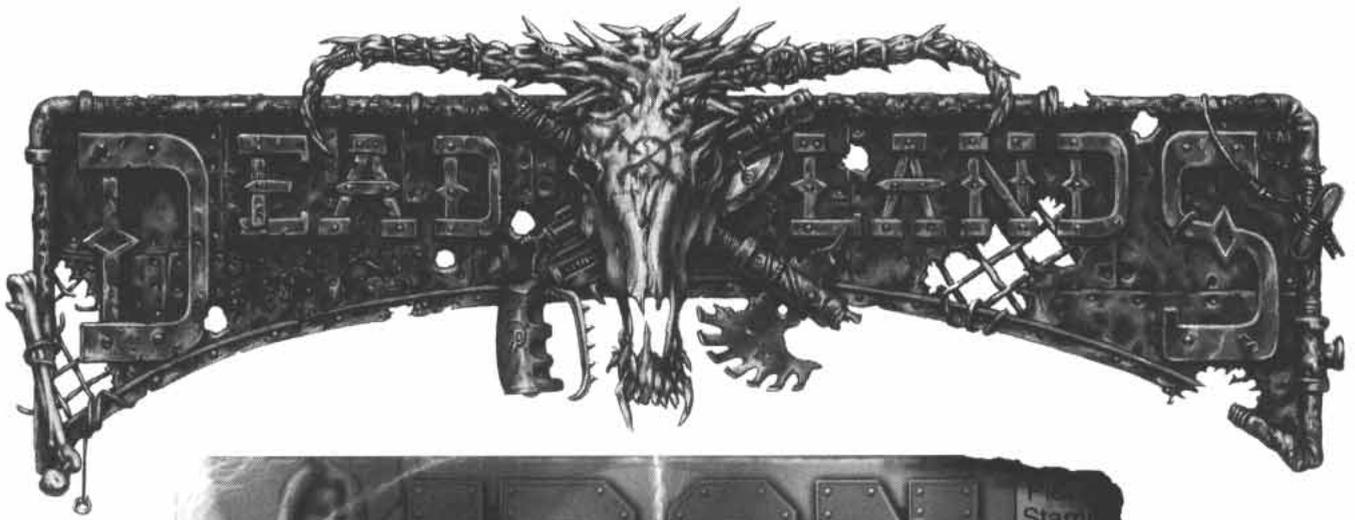# IRON OASIS

By: John Hopler

HELL ON EARTH
The Wasted West Roleplaying Game

Iron Oasis

PINNACLE™

Table o' Contents

The Iron Oasis

Nestled at the foot of the Wasatch Mountains, on a dry and dusty plain, sits Junkyard. From a distance, it looks exactly like its name, a jumbled pile of rusted metal. Up close, it doesn't look much better, but at least some signs of life are visible.

Despite its drab, rusted appearance, Junkyard is a beacon in the Wasted West. It's one of the few places remaining in the world where something resembling modern civilization exists, and more importantly, it's the only thing standing between General Throckmorton and his dreams of enslaving what remains of humanity beneath his iron heel.

Chapter One takes a look at Junkyard through the eyes of Bo Knudsen, an ex-football player and ex-biker turned Librarian. Bo gives you a guided tour of the city, describes the major movers and shakers of the Iron Oasis, and takes a look at some of the problems facing the city today. He also turns up some unsettling news.

Chapter Two introduces rules for flying vehicles and aerial combat. If your brainer ever dreamed of flying with the Sky Pirates, now he can. The rules cover everything from hot air balloons, to helicopters, to air cars and fighter jets. This chapter also has rules for souping up your flyboy's crate and complete aircraft design rules for junkers who want to fly like a bird.

Chapter Three introduces cyberware for those who aren't living impaired. Whether your hero wants to become a scrapper and compete in Junkyard's bloodsports, or simply get a replacement for the arm she had ripped off by a bloodwolf, your waster can now make herself better, stronger, and faster by visiting one of the Iron Oasis' body docs. Is your hero going to buy safe, prewar equipment, or new, junker-built cyberware powered by a dangerous soul tap? It's up to you.

Chapter Four is for Marshal's only. Here we explore the true Junkyard. Find out what's going on behind closed doors at Town Hall, if Judge Tolliver really rigs the fights at the Pit, and what's up with those Gonzers. We also fill you in on the secrets of the Sky Pirates and their enigmatic leader, Raptor.

So come on in out of the Wastes, and get yourself a nice hotel room. Don't get too comfy though, because there's as much danger and intrigue inside the city walls as there is outside.

Posse

Posse

Territory
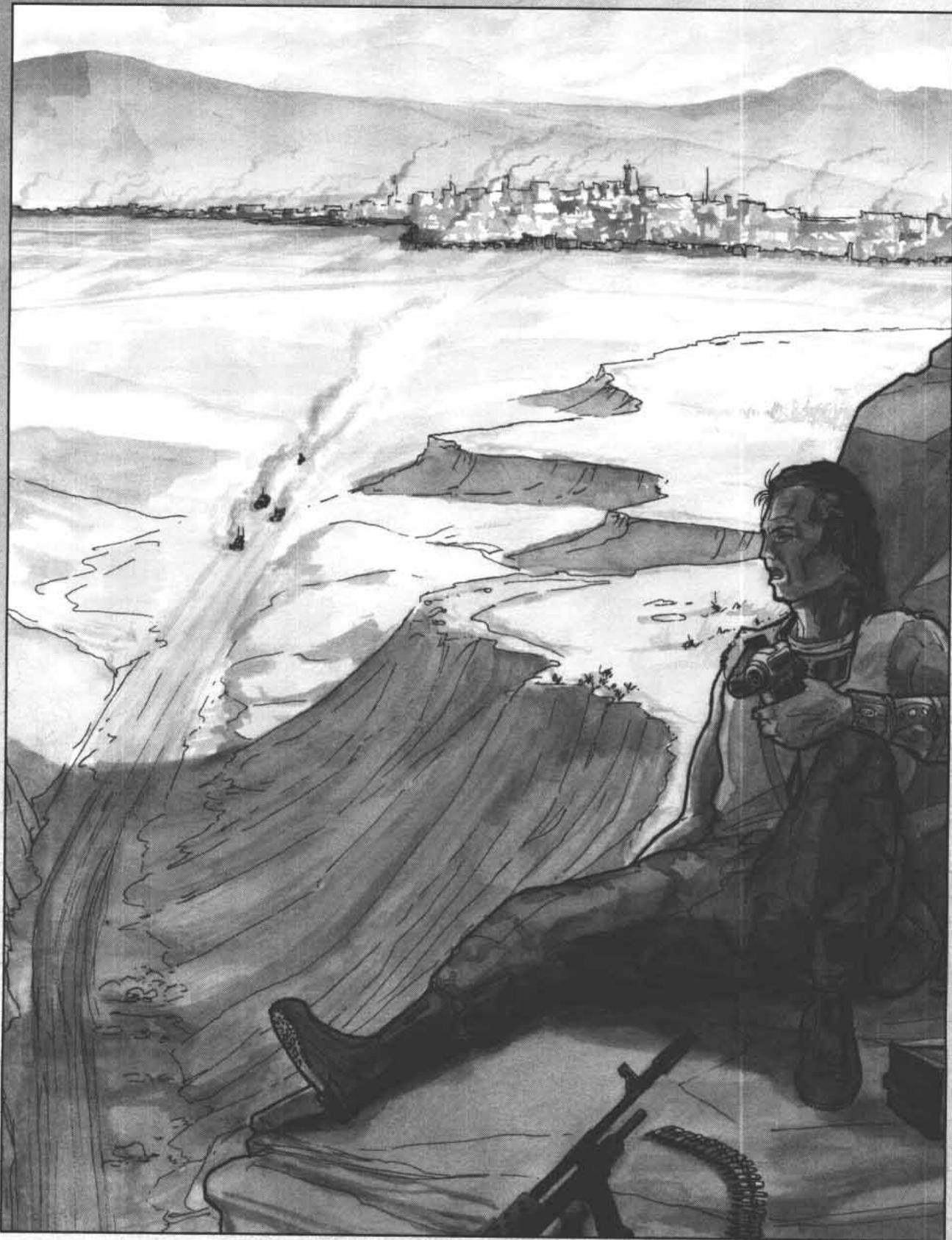
Meaner Than a Junkyard Dog

They'll be coming for me soon, but before they do, I guess I have time to record a message for posterity. I want to set the record straight before I die.

My name is Bo Knudsen. Some of you who were around before the Last War may recognize that name. I played linebacker for the Deseret Disciples, and I was pretty good in my time.

It was only my third year in the NFL when the bombs dropped. Me and the rest of the team were in the air, on our way to a game in New York City. Our plane was out over the fruited plains of Nebraska, pretty far from any major cities, but that didn't stop us from getting caught in the EMP from some blast. I never saw a flash or anything, so I think it might have been a nuke aimed at something in orbit.

Regardless of where it came from, the EMP killed that plane deader than fresh roadkill. I don't know how the pilot managed to set the bird down in one piece, but he did. Most of us walked away from the crash with only a few small cuts and bruises—everyone except for "Dinky" Hopkins. He refused to put his seatbelt on; he just put on his helmet and kept yelling, "Hooyah!" as we went down.

The impact when we hit bounced him off the forward bulkhead. He hit head first and snapped his fool neck. "Dinky" didn't die though, so we gave him no end of crap about it, especially the guys who had to carry his sorry butt around on a litter for the next two months.

So, there we were, the end of the world as we knew it had come, and we were stuck in the middle of a wheat field in Nebraska with a wrecked plane, a crippled defensive tackle, and twenty cheerleaders (okay, it wasn't all bad).

After the team doctors had patched everyone up, we threw Dinky on a backboard and headed in search of civilization. We passed a few abandoned farms and eventually came to a little hayseed town by the name of Purdum.

The folks there didn't quite know what to make of the situation—thirty-some enormous guys appearing from nowhere, complete with an entourage of trainers, doctors, hangers-on, and gorgeous women. Needless to say, we sort of took over the town without really intending to.

The Beginning of the End

I didn't realize it at the time, but that was the beginning of our downfall. You see, to make a long story short, some of the guys took a liking to the way the people in Purdum kowtowed to us, and enjoyed the looks of fear they caused when they lost their tempers. I'm ashamed to say it, but I was one of them.

As the days passed, and it became obvious that no one was going to come looking for our downed plane—ever—we started talking about what to do next. Some wanted to try and hike home to Salt Lake City, others wanted to set up housekeeping right there in Purdum (much to the horror of the locals), and some, the wild ones, wanted to see what sort of brave, new world this post-Judgment Day America was.

Well, as you may have guessed, I was one of the wild bunch. (In my own defense, the whole nuclear war-thing had all of us acting a little crazy.) We stole some trucks, guns, and gas, and headed out on the highway. "Lookin' for adventure" as the old song said, but we didn't exactly take the world in a love embrace.

What we did do, I'm not proud of. We did all the typical things expected of post-holocaust road gangs. We looted, raped, and pillaged, and lived most of our lives in an alcohol and drug-induced fog. That went on for about three or four years. Our gang, the "Disciples of Hell" carved out a bloody reputation as one of the meanest gangs in the Midwest.

Then, one dark night, everything changed for me.

The Book Man

We were poking around in the rubble outside of Omaha when we came across this balding, spindly, little guy hauling books out of a ruined library and loading them into a pickup truck. The brainer had made the mistake of putting his gun down to make it easier to move books, and we captured him without a fight. Some of the guys knocked him around pretty badly, and he was unconscious when we hauled him and his books back to our camp.

Now, I had become kind of restless with our existence. Knocking heads and just taking what I wanted had had a certain simplistic, primeval appeal to it, but after four years of being knee deep in blood, I was looking for a new direction. So, that night, while I guarded the "Book Man" by the light of a fire started with his books, I listened when he started talking to me.

His name was Harrison Tyler, and he was a Librarian. He sat there with tears running down his cheeks as he watched his books burn and explained to me about the Grand Library in Sacramento and the work he and his fellow bookworms were trying to do. He told me about how they feared the coming of a new Dark Age. Despite the huge amount of knowledge the human race had acquired and recorded, especially since the beginning of the Computer Age, it was all in danger of being lost. Much of the information had already been destroyed when all the major cities and universities were nuked, and unless steps were taken to preserve what remained, that too would be lost.

Tyler told me about the Reckoners and the Librarian's population projections. About how the survivor population had dropped dangerously low, and how unless steps were taken to reverse the negative population growth caused by disease, famine, war, and suicide, the human race could become extinct. About how the only hope for reversing this trend was the wealth of information stored in the world's remaining books, computers, and data slugs.

The things he told me, and his obvious dedication to what he believed, touched something deep inside me. Although I had always been happy to play the part of the dumb jock, I wasn't stupid. During my years at Brigham Young University I had studied hard and graduated near the top of my class with a degree in Sociology—something my teammates had given me no end of grief over. As I thought about what Tyler told me, I knew deep down that he was right, and that this little man weeping in front of me was stronger than I could ever hope to be. I became disgusted with myself for being part of the problem. I decided right then and there that I had to save him.

The Great Escape

Later that night, after everyone had passed out around the fire, I cut Tyler loose and bundled him into his truck. I pushed the truck clear of camp, and then I hopped in the back with Rachel—my "hog," a Southern Alliance SAW—and we burned some rubber.

The rest of the gang came after us, of course, and they caught up to us around daybreak. Most of them turned back after I hosed them down with some 7.62, but Dinky and a few others wouldn't give up. It was a Hell of a fight that ended with me and Dinky wrestling in the back of the truck in a pile of books. His neck had never healed right, and when I smacked him upside the head with a heavy encyclopedia, he dropped like a sack of potatoes. I heaved his paralyzed carcass over the side and we got the Hell out of there.

Both Tyler and I were wounded in the fight, so we holed up for a few weeks in a farm in western Nebraska. Once we were healed up, we continued on our merry way to Sacramento.

The Golden State

Things were going pretty smoothly, and we were making good time, until we strayed a little too far south while passing through Colorado. A Raptor spotted our truck and turned it into scrap metal faster than I could blitz a quarterback. The thing didn't hang around to see if there were any survivors, it just toasted the truck and flew off.

Tyler was hit bad and I knew he wasn't going to make it. Before he died, he made me promise to take his palmcorder and some of the books to Sacramento and let them know what had happened. I'd seen a lot of people die since the end of the Last War, some at my own hands, but that was the first time I cried over one of them.

I buried Tyler, filled his pack with as many books as I could, shouldered Rachel, and hit the road. I got out of there only minutes before a Black Hat patrol showed up to investigate the wreckage. I spent the next week playing hide-and-seek with those brainers until they got tired of dying and decided to leave me alone.

A Clean Slate

Once I lost the Black Hats, I continued my pilgrimage to Sacramento. I staggered along with my load of books for nearly a month before a road ganger was nice enough to "donate" his bike to Rachel and I. Having wheels speeded things up, and a little over a week later I arrived at the Grand Library.

To my surprise, I was granted an audience with the head honcho himself, Head Librarian Marcus Liebowitz, and the head of security, Muriel Redwing. (She scared me. I felt like she could see right through my lies into my soul.) I turned my books and Tyler's palmcorder over to them, and they asked me to tell them what I knew of his fate.

Here's where I want to set the record straight. I told Marcus that I had found Tyler dying by the side of the road and had simply honored his last request to bring his stuff to Sacramento. I totally neglected to mention the part about me being a bloodthirsty killer for nearly four years—not because I was afraid that they might try to kill me, but because I feared they might turn me away. I just want everyone back at the Grand Library to know what sort of person I was and that I am very grateful for the chance they gave me to try and make amends for some of the horrible things I have done.

As my last request, I ask that whoever finds this palmcorder return it and the slug inside it to the Grand Library in Sacramento.

Librarian's Note: The following message for Head Librarian Liebowitz was encoded within the previous data.

Marcus,
I wanted to personally thank you for the opportunity to serve the Librarians and for entrusting me with the important assignment of compiling data on Junkyard. I hope my report contains information useful in continuing the Library's important work, and that you can find it in yourself to forgive me for my deception. I like to believe that my work for the Library these past nine years has furthered the cause.

Thank you,

Bo Knudsen

Junkyard: A Brief History

Before I get into what I've learned about the here and now reality of what's going on in the Iron Oasis, I thought it would be good to review how things got to where they are today. This history is a combination of what I learned about the place during my years at BYU and what I've pieced together during my time undercover in Junkyard itself.

The City o' Gloom

Junkyard got its start back in 1870, when Dr. Darius Hellstromme came to Salt Lake City to save the Mormon faithful from being gobbled up by Mojave rattlers. In many ways, the story of Junkyard and Hellstromme's story are one and the same.

In any event, Hellstromme's incredible new invention, the steam wagon, was an instant hit. It allowed people to cruise in and out of the city one step ahead of the giant worms that liked to snack on them.

There was only one catch. All these shiny new steam wagons ate up a lot of ghost rock. The Wasatch mountains outside the city were full of the stuff, but Brigham Young had forbidden the faithful to it—he considered ghost rock "repulsive." However, he didn't have any problems with Gentiles (that's non-Mormons, for you slow types) mining it. Hellstromme convinced Young to allow Gentiles into Deseret to work as miners, and the first mine opened shortly thereafter.

Junkyard is Born

Neither Hellstromme nor Brigham were prepared for what happened next. Thousands of Gentiles swarmed to Salt Lake City to work in the mines. What started as a small shantytown on the northern edge of the Mormon's capitol quickly grew into a city in its own right. More workers arrived to labor in the ghost-rock-powered factories that seemed to spring up overnight.

Although this new boomtown hadn't been what he had in mind, Brigham allowed it to grow because the scientists and industry attracted to the place by the bountiful supply of ghost rock quickly made Salt Lake City one of the most technologically advanced cities on Earth. The place was dubbed Junkyard because of the tremendous tangle of interconnected pipes and wires that sprouted between the buildings. These pipes, dubbed the "Steel Sky" because they often completely blotted out the sky from street level, came to dominate much of the city's skyline.

The technological marvel of Junkyard didn't come without a price, though. The soot from the many ghost-rock-burning factories and steam wagons coated the city in a layer of fine ash, and the runoff from the mines and factories turned City Creek into a slow-moving goop that was renamed Sludge Creek. The ash and the constant pall of smoke hanging over the city gave it it's nickname "City o' Gloom."

Hellstromme Industries

Hellstromme decided to make Salt Lake City his new home and the location of the headquarters for Hellstromme Industries. HI started small, its factories making steam wagons for the residents of Salt lake City, but it grew quickly. Within a few years of opening for business, Hellstromme Industries had branched out into many other fields, like mining and railroads. In 1880, the company manufactured such a wide array of products—everything from windup can openers to automatons—that its catalog was over 1000 pages thick.

Hellstromme's name became synonymous with "new science" and cutting edge technology that seemed to defy the laws of reality. His company's success meant jobs in Junkyard, where most of the Hellstromme Industries factories and labs were located. Until the late 21st Century, Hellstromme Industries employed nearly 80% of all the workers in Junkyard.

The Mormons weren't thrilled about having such a huge enclave of Gentiles literally in their backyard, but the money and other benefits Hellstromme Industries brought—Salt Lake City was one of the first completely

electrified cities in the entire world—couldn't be denied. However, as long as the Junkers kept to themselves and didn't interfere with the faithful's lives, the Mormons were willing to turn a blind eye toward their lifestyles.

From the beginning, life in Junkyard was rough. The inhabitants took a sort of perverse pride in that, and it showed in their rough-and-tumble manners and their choice of entertainment: blood sports. Dangerous games like skullchucker and swing started back in the 1870s and are still played today. (For those of you who may be wondering: Junker with a capital "J" refers to the inhabitants of Junkyard. This is often a source of confusion these days. Many people have suggested changing the word to things like "Junkonian" or "Junkerian," but these names haven't caught on for reasons that should be obvious. The one bit of slang that has caught on is "Yarder." I'm going to use that term for the rest of my report to avoid confusion.)

Going Down?

The success of Hellstromme Industries meant that the population of Junkyard grew every year. By the early 1880s, the place was bursting at the seams and needed to expand. The only problem was that the Mormon leadership of Salt Lake City was unwilling to zone any new land for Gentile occupation.

Junkyard couldn't expand upward with taller buildings because the Steel Sky was in the way. Hellstromme had a few buildings built up into the Steel Sky, but the cost of removing and relocating all of the pipes needed to do this had been astronomical. So the Yarders did the only thing they could: they burrowed into the ground.

Construction on the first sub-level of Junkyard began in 1884 and with the help of some HI digging machines it was completed in 1890. This level was expanded in 1892, and again in 1896. The sub-level was almost a city unto itself, complete with shops, stores, and factories. Many Yarders lived most of their lives underground and often went weeks without seeing the sun. During the 1920s, while other cities were building skyscrapers, Junkyard constructed a second sub-level that extended over 200 feet below the surface.

The New Hellstromme

Sometime shortly after 1900, Hellstromme—who was a very old man at this point—disappeared from public view. Most people assumed that he was sick or had died, but he reappeared in 1917, better than ever. He had traded in his old, frail body for that of one of his automatons, so he could better continue his work.

Hellstromme Industries and the factories of Junkyard played a vital role in the war effort during both World War I and II. Hellstromme himself worked on the designs of new weapons during the wars, and the exposure this brought made him the darling of the media for quite a while. Everything he touched seemed to turn to gold, or at least that's how it was reported. If you read some of the old newspaper reports about the "incredible genius of Dr. Hellstromme," it sounds as if the guy farted rose-scented perfume. Junkyard's population continued to grow during this period and there was talk of opening a third sub-level.
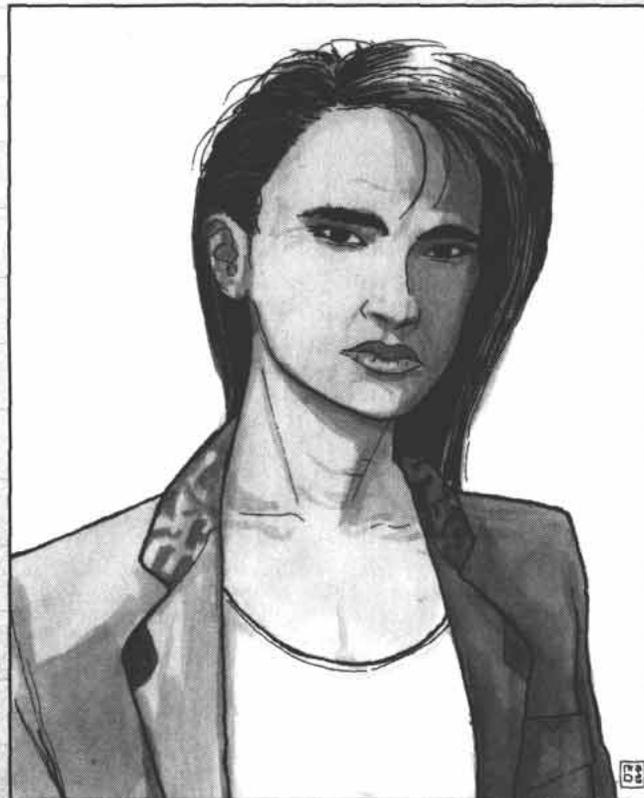
Doctor Maria Mendoza, head surgeon of Junkyard Memoria Hospital. See page 27.

Junkyard's Growing Pains

The high point in Junkyard's history probably came during the late 1950s. The second sub-level was expanded and the city's factories ran 24 hours a day to fill orders for both the US and CSA militaries as they built up to face the Soviet threat in Eastern Europe.

Hellstromme's golden boy image lost some of its luster in the postwar years. The public's fascination with everything atomic brought more traditional scientists like Oppenheimer and Einstein into the public spotlight. This was to have some serious ramifications down the road (like the deaths of 90% of the world's population), because it sparked Hellstromme's interest in nuclear technology and led to the development of the City Buster missiles which sent the world to Hell on Judgment Day.

Hellstromme Industries support of the war effort in Vietnam proved to be unpopular, especially with the Mormons. Anti-war activists in Deseret called for a boycott of HI consumer goods and autos from Hellstromme Motors. Despite large military contracts, the company's profits sagged, and in 1968 the first layoffs in Hellstromme Industries' history occurred.

The Vanessa Hellstromme Memorial Skydome

Renewed demand for ghost rock power plants during the oil crisis of the 1970s helped the company rebound, and by the mid-1980s, the economy of Junkyard was thriving again. However, all this new economic activity and the increased manufacturing of heavy equipment in the city caused some new problems.

To ease the smog which sometimes threatened to smother Salt Lake City on calm days, the factories in Junkyard installed extra-tall smokestacks that poked up through the Steel Sky like toothpicks in some enormous metal *hors d'oeuvres*. This cleaned up the air in Deseret, but it simply meant that the pollution came down somewhere else.

It didn't take long for people in Colorado to get their panties in a bunch about the black rain falling there. The acidic water killed trees, poisoned lakes, and corroded outdoor equipment. At first Hellstromme chose to ignore the complaints, but eventually the US government got involved and threatened to impose economic sanctions on Deseret if the situation wasn't rectified. Of course, what really got the good doctor's attention was when the US military started to make noise about canceling some of its contracts.

Hellstromme reacted in his typical fashion, which is to say, complete overkill. Rather than try to reduce emissions from his factories, he decided to build a dome over the entire city to trap them. Needless to say, there were many people who thought the doctor had finally, truly, for-real-this-time, gone completely, stark raving mad (people usually said this about him at least once a decade).

Although the two sub-levels had been using air filtration systems for decades, lots of Yarders were nervous about completely sealing the city. It's not like they'd miss the sun, the Steel Sky had blocked that off long ago, but the idea of being trapped inside a sealed dome with the huge amount of black smoke they saw pouring from the factories on a daily basis was a sobering thought.

Construction on the dome began in 1987 and was finished four years later. The final dome started at the southern and western edges of Junkyard's city limits, rose up and over the Steel Sky, and then continued back until it ran into the slopes of the Wasatch mountains on the city's northern edge. With the exception of Black Tuesday in 2069 (power to the filtration system was accidentally knocked out by saboteurs attacking a City Buster plant and over 2000 people died), the Vanessa Hellstromme Memorial Skydome (named for Hellstromme's late wife) worked without a hitch.

HI International

The dome wasn't a dome in the true sense in that it was flat on top. Three years after the dome was finished, Hellstromme announced his intention to build an airport on the roof of the dome. He had planned this all along, but the doctor had learned long before that he needed to break his more fantastic projects up into bite-sized chunks that got people only slightly worried.

Construction of the airport took only three years, and HI International opened for business on schedule June 6, 1995. The new trade this brought to the city caused another economic boom for the area, and by the year 2000 nearly 200,000 people called Junkyard home.

The residents of Salt Lake City weren't crazy about having jumbo jets screaming in for a landing directly above the Tabernacle, but the tax dollars it brought in overrode their common sense for a while. People from all over the world came to the area to see what was universally hailed as one of the great wonders of the modern world. The tourist industry throughout Deseret boomed.

The Last Straw

The Saints of Deseret were a long-suffering people, but eventually Hellstromme went too far even for them.

In 2044, Hellstromme's most incredible achievement of his career, the Tunnel to Faraway, opened. Not long after, video of HI battle troopers slaughtering peaceful Anouks leaked to the press. Deseret's President James Snoddy was outraged by the carnage he witnessed on the tapes. He personally revoked Hellstromme's citizenship and had him deported as an undesirable alien.

Hellstromme used his extensive military contracts as leverage with the US government to gain US citizenship and relocated his operations to Denver. Most of the Hellstromme Industries factories and offices in Junkyard shut down and relocated with him. Only a few research labs and production facilities, along with a small staff to maintain the dome and airport, remained behind. Overnight, thousands of Yarders found themselves unemployed. Most of Hellstromme's research staff were able to get visas and emigrated to Denver, but most of the HI factory workers were stranded in Junkyard.

This started a long, downward spiral in Junkyard's fortunes. The Mormon church stepped in to aid many of those left behind, but despite the church's best efforts, conditions in Junkyard went from bad to worse. Riots were common and crime levels skyrocketed.

Gangs operating in the Steel Sky and the access tunnels of the sub-levels had always been a problem, but their power increased tremendously after Hellstromme Industries
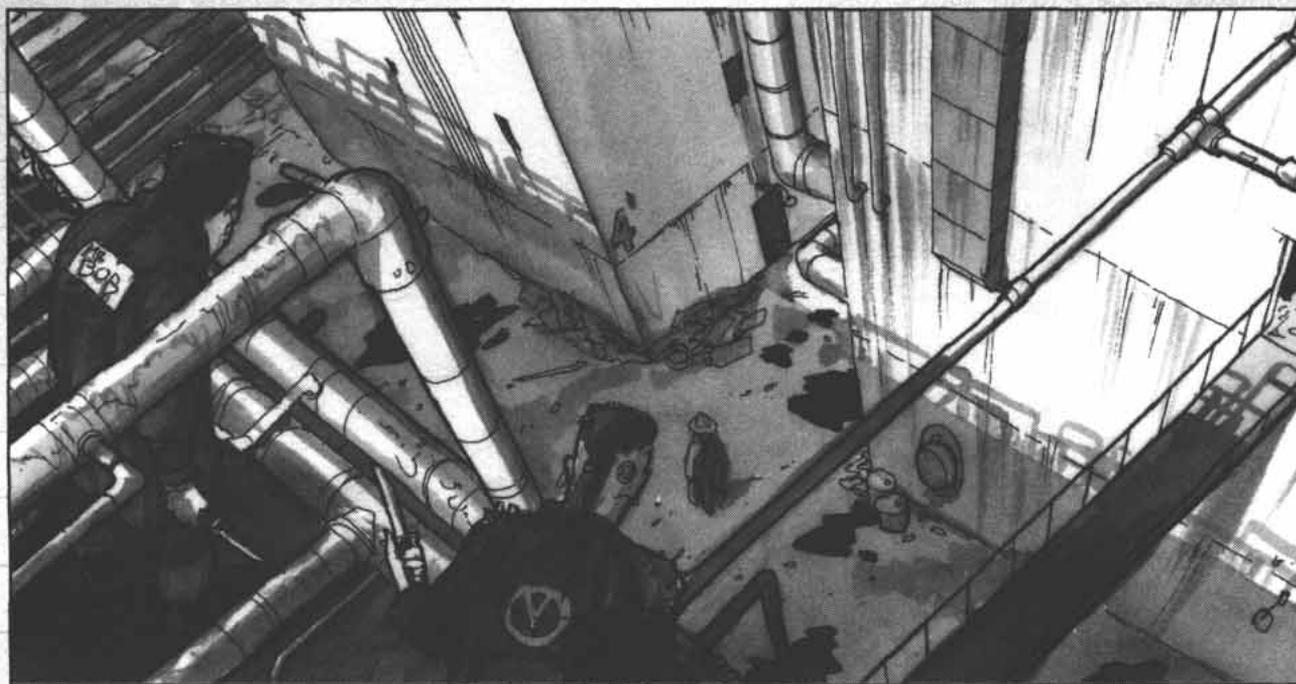
A gang of lurkers eye a prospective victim.

and its powerful security forces pulled out. Within three years after the company left Junkyard, the city's population had dropped to 60,000, Sub-level Two was closed, and most of the businesses that remained paid protection to the organized crime syndicates which had filled the power vacuum.

Things in Junkyard continued to go from bad to worse over the following decades. The high tax rates imposed by Deseret and the problems caused by the crime syndicates prevented any new employers from moving into the area. In 2060, Sub-level One was closed and less than 40,000 people remained in the city. Of course, the official closing of the lower levels was only as meaningful as the Junkyard police's ability to enforce the order. The sub-levels became havens for the homeless, addicts, and some of the city's worst criminals. By 2070, the police had completely ceased patrols in Sub-level Two.

The Death Dome

The only paying industry left in Junkyard in the decades leading up to the Last War were the bloodsports which had been popular since the place's founding. Major networks from around the world paid big bucks to televise the daily events that were held in the city's arena.

As conditions worsened in the Yard, the events became more and more deadly. The career of even the best gladiators could be measured in months. The only people who made any real money from these games, and lived to spend it, were the bookies and the body docs. Junkyard became known as the "Death Dome."

Bionics systems for living people had been pioneered in Junkyard. They were intended to help unfortunate amputees and those in need of organ transplants, but the booming bloodsport craze caused them to be adapted as weapons. The body docs who were willing to install these biomechanical monstrosities made fortunes at the expense of their patients.

The Mormons were mightily embarrassed by this turn of events. There was talk of mobilizing the Nauvoo Legions (the Deseret army) to clean the place out, but then the Last War began and scrapped that plan.

Judgment Day

Just when it seemed that things had hit rock bottom, along came Judgment Day and the Reckoners. As bad as this was, there are a lot of Yarders who think that the end of the world was a good thing for Junkyard.

The Yard was near the top of many people's target lists when the missiles started flying—the few remaining Hellstromme facilities in the city guaranteed it a spot on the list of the Top Ten Nukable Places in the World. Salt Lake City and Junkyard were hit by no less than six City Buster-sized warheads.

Shields Up

The only reason I'm compiling a report on Junkyard-the-city as opposed to Junkyard-the-really-big-hole-in-the-ground is because Hellstromme left a few goodies behind when he fled to Denver. The number one item on this list was an energy shield capable of absorbing the blast of a nuclear warhead.

No one in the city knew this shield existed (although I suspect some of the Hellstromme "maintenance" people did). When the air raid sirens started wailing on September 23, most people put their heads between their knees and began saying farewell to their nether regions.

The first bomb detonated 5,000 feet above the city at 11:00 A.M. local time. The shield activated a split second later and deflected the blast. Good news for people in the 'Yard, not so good for the Saints in Salt Lake City. Most of the downtown area disappeared beneath a skull-shaped cloud, killing hundreds of thousands of people. The shock wave rocked Junkyard and a few unlucky individuals were killed by falling pieces of the Steel Sky, but there were otherwise no casualties.

The next four bombs detonated within seconds of each other, making the valley shake like the earth itself was having a seizure. Some more pipes came crashing down and a few buildings collapsed, but the shield held. These bombs completed the devastation outside the dome, removing Salt Lake City from the map.

The final bomb hit a few minutes later, just as the first stunned citizens of Junkyard began to realize that they were still drawing breath. It finished off a few buildings that had been weakened by the earlier blasts, and ground the remains of Salt Lake City into even finer dust, but it did little real damage.

Then it became deathly quiet, the only sounds those of wounded people moaning beneath collapsed buildings, and the occasional metallic groan of weakened pipes. The people of Junkyard sat in stunned silence while they contemplated what had happened.

Aftermath

The minutes ticked by as everyone waited for yet another blast that would surely finish them off. When it didn't come, people began to organize rescue parties to free those trapped in the rubble. For once, everyone in Junkyard pulled together to help each other. Many of those who were there recall it as Junkyard's finest hour.

And that's about how long the spirit of cooperation lasted. Once the initial shock wore off, people began looting, leaving the injured to fend for themselves. The food stores were picked clean as everyone realized that they were trapped within the dome and that no food would be coming from the outside for quite a long time.

Riots raged throughout the city. The gangs syndicates, and everyone else who owned a gun began taking food from those who didn't. Only a few hundred people died from the damage caused by the bombs, but thousands were killed in the food wars that followed. Those who had food barricaded themselves inside buildings and fought off attacks by those outside.

To the surprise of most of the remaining Hellstromme employees in Junkyard, within minutes after the final blast the PA systems in their buildings began playing a message recorded by Hellstromme himself. The message instructed them to remain calm and directed them to a number of bunker-like shelters built deep within the basements of the Hellstromme facilities. These bunkers were fully stocked with food, weapons, and medical supplies.

Even more surprisingly, automatons appeared from hidden storage facilities and formed a perimeter around the Hellstromme buildings. Rioters who strayed to close to these guardians were cut down in a hail of automatic weapons fire.

The Glow

Anarchy reigned for the next few weeks in Junkyard, and it took a while before anyone noticed that something peculiar was happening. The dome over the city began to glow with a sickly green light. The glow was barely noticeable at first, but it grew stronger with each passing day. After a week, light from the dome was so bright that anyone foolish enough to venture out on the streets had to wear sunglasses to avoid damaging their eyes. Although the dome didn't give off any heat, those who touched it were horribly burned and died within a few days. The burn victims' symptoms described to me sounded a lot like radiation poisoning.

The impact of the bombs made many mine shafts unstable.

Junkyard is famous for the quality of its cyber•surgeons.

The Battle for Junkyard

A little more than three weeks after the bombs dropped, an enormous sea of hungry and disgruntled Yarders assembled outside of the Hellstromme Industries headquarters. Beleaguered HI executives attempted to negotiate with the mob, which was made up of equal parts gangers, mobsters, and ordinary citizens, and at first it seemed as if things might be resolved peacefully. Food was brought up from the bunkers and distributed to the crowd.

Then someone fired a shot. It killed one of the HI execs instantly. All Hell broke loose. More shots were fired and the roaring crowd surged forward. The leading edge of the crowd was cut down by fire from the automatons but they kept coming. Cyber-gladiators in the crowd leapt forward to fight the HI war machines. The ring of robotic defenders wavered for a second and then broke under the wave of enraged humanity swarming over them. The HI security troops fell back toward the building, but they were cut down before they could seal the entrance. The howling attackers swept into the building's lobby unopposed.

An Unlikely Hero

A room-by-room battle for the lower levels of Hellstromme Industries headquarters raged for three days. The defenders were eventually forced to fall back to the bunkers in the basement. Many of the demoralized HI employees simply wanted to wait the mob out—there was enough food in the bunkers to last for years, and eventually the people outside would get hungry and go away.

An HI factory foreman by the name of Ike Taylor knew better. He realized it was only a matter of time before someone outside got the idea to grab some heavy equipment from one of the factories and cut their way into the bunkers. After shouting down the few remaining HI suits who wanted to negotiate with the horde, Ike convinced the workers that their only hope for survival lay in taking the fight to the enemy. The pugnacious foreman organized everyone who was willing to fight into squads and passed out weapons.

After the second week, it wasn't safe to venture outdoors without heavy protective clothing. Any bare skin exposed to the light quickly turned red, as if from a sunburn. Prolonged exposure caused serious burns, and many people developed cancerous growths on their skin. This development put a temporary end to the fighting on Junkyard's upper level, but battles still raged in the darkness of the sub-levels.

The glow started to subside during the third week. People began to emerge from beneath whatever rock they had hidden under. That's when word got around about the ring of automatons surrounding the Hellstromme Industries building.

It didn't take long for everyone on the outside of that robotic wall to decide that the answers to all of their problems could be found inside the Hellstromme headquarters. Groups that had been at each other's throats only days before got together and began plotting how to take what "those damned Hellstrommers" had.

The next morning, the bunker doors swung open and the factory workers, led by the surviving security troops, charged out to attack the startled besiegers. The crowd was caught by surprise by the assault, and quickly broke and ran. Most fled to the safety of Sub-level One.

Ike's gamble had paid off and his prediction proved true—the attackers found a laser drill in the lobby that would have quickly burned its way into the bunkers. From that moment on, the factory foreman had the unquestioning loyalty of the remaining HI employees. Ike knew that it would only be a matter of time before the hungry crowd returned, so he put his people to work fortifying the buildings' entrances.

Exodus

While Ike and his workers erected barricades, a team of scientists went to their computers on the upper floor and checked on conditions outside the dome. To their surprise, they found that the radiation levels outside the city had dropped down to nearly normal levels. They quickly relayed this information down to Ike.

When the hungry mob began to reassemble in sight of the HI headquarters, Ike addressed them over the building's public-address system. He informed them that it was now safe to leave the dome, and that anyone who wanted to find food had better do so, because they weren't going to get any out of the bunkers without a fight.

A few hotheads tried to rush the building, but they were quickly dealt with. The rest of the crowd slowly broke up and drifted away to ponder the situation.

It took a few days before anyone was willing to risk leaving the dome, but once a few did and survived, the trickle of people leaving Junkyard turned into a steady stream. A seemingly endless line of vehicles flowed through the city gates for nearly two and a half days. By the end of that time more than half of Junkyard's surviving population had left the city, leaving less than 3,000 people inside the dome. Nearly 1,000 of those who remained were ex-Hellstromme employees loyal to Ike Taylor.

Meet the New Boss

Ike didn't waste any time before he threw his weight around. Once most of those who wanted to leave had vamoosed, he sent messengers to all of the remaining survivor groups in the city. He told them that his group was willing to share their food with the others on one condition: they followed Ike's orders and worked for their keep. With a few exceptions, most of the groups accepted his conditions.

Ike set everyone to work on important projects. The scientists were put to work restoring vital city functions like power and the dome's air filtration system, while the workers began the repulsive job of removing the bodies of the dead and fortifying the entrances to the city. The security troops stood guard over the precious food supply in the bunkers and protected the workers from attacks by the few holdout groups that still wanted to take what wasn't theirs.

Spook Juice

The fearless foreman had some help getting the Junkyard survivors back on their feet. One of the most influential of these people, then and now, is Doc Schwartz. Doc was a Hellstromme-Industries-trained junker. That's right, he was a junker *before* Judgment Day. Evidently Hellstromme was on to that line of tech before things went to Hell.

Be that as it may, Doc's big contribution to the rebuilding effort was letting Ike in on his secret project: a liquid form of ghost-rock fuel he called spook juice. Doc had begun work on this new fuel only a few months before Judgment Day, and he had made his first successful batch only days before the bombs fell.

Ike instantly grasped the possibilities of this new fuel for the postwar world and gave Doc Schwartz all the eggheads and laborers he needed to get a full-scale spook juice refinery up and running. Junkyard's new leader feared that many of those who had left would soon return when they discovered that things weren't much better on the outside. Ike wanted to have an ace-in-the-hole when they came back.

Showdown

Ike's instincts served him well. Less than a month after the first people had left Junkyard, groups of them began returning. They brought with them tales of devastated cities, howling ghost rock storms, road gangs, and strange creatures stalking the countryside. Those who seemed peaceable enough, and were willing to work, were allowed to re-enter the city.

Unfortunately, these groups made up only a small part of the returning citizens. Most of those who had been tough enough to survive outside Junkyard came back with new friends and lots of shiny new toys that went "bang." Lured by tales of an enormous stockpile of food beneath Junkyard, road gangs began to show up at the city's gate on an almost daily basis.

Dealin' With the Devil

Ike had a plan for dealing with these hard cases. The weapons from the HI bunkers had been augmented with a variety of spook-juice-burning flame weapons. Ike had his work crews place plenty of burned-out wrecks from inside the city around the flamer emplacements, and then he invited the leaders of the gangs in for a tour of the defenses. The sight of the torched cars got their attention pretty quickly—they had no idea that Doc Schwartz wasn't even sure his new weapons would work under combat conditions.

Ike's little show was mostly bluff (not anymore, any gang that gets out of hand these days gets their heads handed to them on a silver platter), but it worked. He hammered out a deal with the gangs: they would bring Junkyard food and trade goods, and in exchange, the city would provide them with the spook juice they needed to keep their rides rolling.

Ike was, and still is, uneasy about dealing with the gangs because he knows that much of the loot they bring to the city was taken from some other survivor settlement—probably by force—but he feels that his first responsibility is to the people under his protection. All others come second. How do I know this? Because Ike told me so himself.

The Iron Oasis Today

Now that you know where Junkyard came from, it's time to talk about what's going on there right now. Most of the information in the rest of this report I picked up while undercover in the Iron Oasis. I entered the city without my Librarian pin, and I performed only one formal interview. I've found that if you really want to get a feel for what a place is like, it's best not to let anyone know you're a Librarian. When people know that something's being recorded, they tend to skew things to make themselves out to be more important and knowledgeable than they really are. Plus, after running with a gang for four years, I can talk smack with the best of them and I figured I could blend right in. If it works for the Templars, it should work for me.

The Basics

Okay, here's the fifth-grade geography report on the place:

Junkyard has a population of around 10,000 people. It's by far the largest known survivor settlement with the possible exception of Denver, but since Throckmorton is unlikely to cough up his census data anytime soon, we may never know for sure. The city has a full-time militia of around 800, and all citizens are expected to serve in times of crisis. The city also has alliances with several road gangs and the Sky Pirates (more on them later).

Junkyard's primary exports are spook juice and junker-built gadgets, primarily cyberware. The city's primary import is food, and lots of it. The city is open to all those wishing to trade, and the Convoy stops here twice a year. Primary industries are ghost rock mining, electrical generation, and junker manufacturing.

Junkyard's primary forms of entertainment are getting blind drunk and watching bloodsports (both are usually done simultaneously).

Junkyard is a dictatorship run by a man named Ike Taylor. Ike has an informal cabinet of advisors who help him with the day-to-day administration of the city.

The 50-Mile Limit

I guess I'll start at Junkyard's outer edge and work my way in. Junkyard lays claim to all territory within 50 miles of the city. This area is patrolled by units of the city militia and by the gangs which have formally allied with Junkyard. All of the main roads, and many of the secondary roads, are clearly marked with signs warning travelers that they are entering Junkyard territory and are now subject to the city's laws (more on those later).

The main highways, Deseret Routes 80 and 84, have been cleared and patched within the patrol area and there are armed checkpoints at the edge of the 50-mile limit. These roads are a tangled mess of wreckage and burned-out vehicles just beyond the limit. This is due to the agreement that Ike has worked out with the gangs.

Amnesty Zone

Within the 50-mile limit around the city, no person can be arrested or attacked for crimes they committed outside this zone. This allows the road gangs that plague the Wasted West to come and go without being harassed by Law Dogs, vengeful relatives, and the like. The Junkyard units which patrol the zone enforce this restriction religiously because it's the trade with these gangs that keeps the city alive.

The garrisons at the highway checkpoints are under strict orders to observe this agreement down to the letter. This has led to some strange situations where a road gang has attacked travelers within sight of the border post, fled across the border into Junkyard territory, and the guards arrest their victims for firing on the gangers after they entered Junkyard territory.

Of course, this cuts both ways. The guards won't lift a finger to help a gang after they've left the zone. Law Dogs often hang out near the border checkpoints and jump their prey as soon as they cross the line. The arrest restriction doesn't apply to criminals captured *outside* the 50-mile limit, so if a Law Dog takes down some scum three feet over the line, he can haul the brainer's carcass back to Junkyard to be sentenced by Judge Tolliver.

Junkyard's Scariest Gang Chases

As a result of all this, the area on just the other side of Junkyard's border has been the scene of countless battles and chases. To help sate the population's craving for bloodsports, all of the border checkpoints have been equipped with cameras and transmitters that allow them to broadcast the fights live. These are usually shown on large outdoor screens in Junkyard's market area where shoppers can bet on them.

Although this policy has kept the gangs coming with food to trade for spook juice, it has had the unfortunate side effect of providing a refuge for some truly sadistic bastards. Quite a few gangers who have been accused of heinous crimes have come to Junkyard and stayed. As long as they keep their noses clean in the Iron Oasis, they can't be touched (at least not without incurring the wrath of Judge Tolliver and the militia). I guess, of course, that some of these wasters have turned over a new leaf (I know all about that), so I shouldn't throw too many stones.

Members of the Junkyard Militia arm up before going on patrol.

Getting In

Provided you make it over the border in one piece, you're free to travel anywhere within the patrolled zone. You can go straight to Junkyard, visit one of the other survivor settlements in the area (check the end of this report on page 45 for details), or just camp out—it's up to you.

If you go to the "Big J," you'll most likely have to wait in line to get in. Junkyard's outer wall has only one gate, and there's always a steady stream of traffic going in and out during the daylight hours. Security for traffic entering the city is pretty tight, so the inbound lane moves much slower than the outbound one.

The gate leading into the city is a double one with a wall dividing the inbound and outbound lanes. Incoming vehicles and pedestrians are allowed past the outer gate in groups of two or three vehicles and 10 to 12 pedestrians. Once the travelers are inside the gate area, the outer gate is closed. Guards in this area, covered by other guards in the towers flanking the gate, inspect all the incoming travelers and their vehicles to make sure they aren't wanted for any crimes in Junkyard, and collect entry fees. It costs $50 in trade goods a head, and $100 per vehicle, to get in the door. Junkyard citizens can come and go for free.

Cyborgs have to pay $150 to get past the gate. I asked one of the guards about this and he said the higher fee was because they've had problems with cyborgs in the past. It seems that every once in a while a deader's AI decides that it's on some vital secret mission and starts gunning people down or blowing things up.

When I passed through the gate, the guards were accompanied by a small pack of surly-looking guard dogs. One of them carried some sort of gizmo he waved over everyone passing through. A junker entering the city with me said it was a cyber scanner. With all the problems Throckmorton has been causing lately, Junkyard's leaders are extremely paranoid about Combine cyborgs slipping into the city. Given that an infiltrator cyborg (one that's generally indistinguishable from a normal person) had taken a few potshots at Ike only the week before, it didn't seem like an excessive precaution.

Travel Passes

Once the guards have determined that you're not a menace to society and you've coughed up the goods, you're issued a travel pass that's good for a week. The pass can be renewed at City Hall for the same price that it cost to get past the gate. The guards don't actively hunt down people whose passes have expired, but patrols in the city frequently ask to see your papers—if you don't have a pass or citizenship papers you're on your way to a talk with Judge Tolliver.

There's a hot trade in false papers on the black market, but the quality and price of these documents varies wildly. There's also a steep price for anyone caught dealing forged passes. The person supplying the pass is put to death, and the buyer is normally sentenced to five years at hard labor in the city's ghost rock mines.

Hundreds of road warriors come to Junkyard for the spook juice.

Widgets

Just inside the gate is a large warehouse where you can wait in line again. Inside this building are more guards, a number of tables with large scales and sharp-eyed men sitting behind them, and an enormous pile of junk. This is Junkyard's main monetary exchange.

Junkyard prints its own currency. The unit of currency in the Iron Oasis is the widget. Like currencies back in the olden days of the early 20th Century, the widget is backed by a supply of precious metal. Only in Junkyard, the money supply is not on the gold or silver standard, it's on the junk standard.

Any sort of technological items from toasters to guided missiles can be turned in for widgets at any of the city's money exchanges. The junk collected in this way is picked up every night and taken to a central repository on the west end of town where workers go through the stuff and remove any obviously useful items, like working weapons, for the city's use. The rest of the stuff is catalogued and stored in a series of enormous and heavily-guarded warehouses.

You can go to the Junk Repository at any time and exchange your widgets for junk. Most of the people who live in Junkyard never do this because widgets are an accepted form of payment throughout the city and in many survivor settlements nearby, but the junkers who are the driving force behind Junkyard's economy often turn their widgets in for toaster coils, commode seats, or whatever else they need to complete their devices.

The appraisers at the money exchanges are shrewd hagglers, so don't expect to turn in a bunch of porcelain doorknobs for a pile of cash. The prices for various items also fluctuate up and down depending on supply levels in the Repository. An electric can opener that is worth $15 in widgets one week, might be worth only $1 after the Convoy has been through and dropped off an entire truckload of them.

It's not necessary to exchange your trade goods for widgets, but it certainly saves a lot of haggling time down the road. It's also a lot more convenient to carry a small wad of blue paper bills than to lug around a backpack filled with salvage.

Outer Junkyard

Passing through the main gate takes you into Outer Junkyard. Most of this area is a cleared field pockmarked with the occasional blast crater. It was the heart of downtown Salt Lake City before the bombs hit.

Now this area is primarily used as a camp ground by gangs and trade caravans that are visiting the city. Anyone who doesn't want to shell out for a room in the city can stay here free of charge. The only restriction placed on people camped in Outer Junkyard is that they must use the designated latrine areas. Relieving yourself anywhere else means a $50 fine if you get caught. The guards who patrol this area are very strict about enforcing this rule. Improper sanitation by visiting gangers caused a flu epidemic a few years ago that killed nearly 1,000 people.

I spent quite a few nights in this area talking to visiting gangs and traders and getting a feel for what was going on in and around Junkyard.

The Market

At the eastern end of Outer Junkyard is the Market. This consists of a large warehouse surrounded by some ramshackle booths and the tents of traveling merchants. Traders can rent booths inside the warehouse for $25 a day or they can set up outside for $10 a day.

The variety of stuff available here is eye-popping.

There are weapons of all types on display. I saw everything from knives to guided antitank missiles. Although many of these weapons had been scavenged from who-knows-where and looked it, a good portion of the weapons had been made in Junkyard.

There are a number of talented metalworkers in the city and they turn out small quantities of swords, axes, knives, and even armor, every year. There are also some gunsmiths who specialize in rebuilding firearms from scavenged pieces, and a few who actually handcraft guns from scratch. All of these tradesmen have shops in Inner Junkyard, but sell their wares at the Market.

Junker gizmos of all types are also plentiful. Like the more mundane craftsmen, junkers maintain their workshops in Inner Junkyard and sell their goods at the Market. Weapons are common at the junker booths, but there are also many other items like first-aid packs, robots, and beer coolers. A few booths held sample cyberware from the body docs. You can select the gear you want at the booth, and make an appointment to visit the doc later and have it installed.

Most of the visiting merchants have more eclectic selections that included everything from weapons and armor to horses to clothing and jewelry. The one thing these traders have in common is that they won't reveal how they acquired their goods. In fact, just asking the question usually got me a glare as if I had just flung Mojave rattler turds on the merchant's youngest child.

The Market has a wide selection of vehicles and spare parts. Next to the weapon dealers, these traders were the most popular with the visiting gang members. Besides a good variety of cars, trucks, and motorcycles, I saw a pair of ultralights for sale, and some poor brainer was trying to unload a bass boat and trailer.

The Pit

The only other place of interest in Outer Junkyard is the Pit. It's pretty obvious how the place got its name: it's a big blast crater that's been dug out and ringed with a spiked, metal fence topped with barbed wire. Some of the locals claim the crater was caused by a 2000 lb. bunker-buster the Rebs dropped on a Deseret command post. I don't know about that, but it sure is one Hell of a big hole.

The Pit is surrounded with bleachers. These are for all the paying customers who show up each night to watch some gladiators knock the snot out of each other or some strange creature hauled in from the Wastes. Admission to the fights is $5. You can place bets with the house, or with anyone in the stands who's willing to put up some cash.

There are usually at least five or six events a night (some of them go really quickly). Most of the fights are gladiator-on-gladiator or team-on-team. Most of these fights are simply

until one side concedes, but deaths are still pretty common. A good portion of the gladiators have bionic enhancements. Since most junker-built cyberware looks like it came straight off the scrap heap, these souped-up warriors are called "scrappers."

The events which are the favorites of the crowd are the fights which feature a condemned criminal versus some abomination hauled in from outside the city. These fights are usually terrible mismatches, but often the criminal's desperation (he gets a full pardon if he wins, he goes in the ground if he loses) gives him that extra something that makes the fight interesting.

Anyone can fight in the Pit. Yarders who have wracked up a debt they can't pay, and many scrappers who are about to miss a payment on their new hardware take their chances in the Pit. I'm told that first-time fighters are usually paid 2% of the house take on the bets for their fights if they win. If they lose, they get bupkus.

Judge Tolliver

The man getting rich from all of this action is Judge Richard Tolliver. He owns the Pit, and all the money that's left after the surviving fighters have been paid off goes straight into his piggy bank—a piggy bank that by all accounts is about the size of a two-story building. Tolliver is also "the Law" in Junkyard. All violent crimes and other serious crimes which aren't covered by established fines come before the Judge.

In her interview, Jo said that Tolliver was as crooked as a dog's leg. That may be true when it comes to the games he runs at the Pit (although no one has ever been able to prove it), but he can't be bought when he's sitting on the bench. Some of those who have tried have actually lived to regret it, but most have ended up in the bottom of some critter's gullet in the Pit. Judge Tolliver is what you might call a hanging judge. Criminals brought before him are lucky to be banished or sentenced to life in the ghost rock mines. I will say this, in the day I spent in his court, I never saw him give anyone preferential treatment. He was harsh but fair, in a kind of "if you hang 'em all you get the guilty" sort of way.

I'm puzzled by all the rumors about Tolliver rigging some of the games at the Pit. Both Ike and Doc Schwartz seem like old-school, honest guys, and I can't see them putting up with that sort of thing, even if he was judge before the war. Of course, none of these stories have been proven, so they may be false, and despite the rumors, people keep paying $5 to plop their rear ends on the Judge's bleachers.

One last thing. Tolliver is called "Judge" by his friends, "Judge Tolliver" by his acquaintances, and "Your Honor" by those in his court. Don't *ever* call him Dick.

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The Law in Junkyard

As long as I'm on the subject of Judge Tolliver, I might as well touch on how the law works in Junkyard.

The city militia doubles as both army and police force. In addition to sentry duty on the walls and at the gates, militia members make regular patrols through the city streets, usually in pairs. Patrols in Outer Junkyard usually have four or more members, depending on the size and number of gangs camping out there.

Anyone caught breaking a law for which there is a fine, like taking an illegal dump, is charged the money on the spot. If the offender can't or won't pay, they get to see Judge Tolliver. Fines can be appealed to the Judge, but he takes a dim view of people who waste his time with such trivial matters, and most people who appeal end up wishing they hadn't.

More severe crimes, like stealing, destruction of property, and the like, all get brought before the Judge. Punishments for these sorts of crimes range from 3 months in the ghost rock mines for a first offender to loss of a hand for a repeat thief. Rapists lose the offending body parts on the first offense.

Most crimes involving the loss of a human life get the death penalty. The nature of the execution depends on the circumstances of the crime. Judge Tolliver is a definite believer in an-eye-for-an-eye justice and makes the punishment fit the crime. In cases of self defense in which there are no witnesses other than the deceased, the defendant gets the benefit of the doubt and gets to fight in the Pit.

Trade Law

Because trade is such a vital part of Junkyard's economy, the laws concerning it are strict. Knowingly selling someone faulty or defective merchandise (it's up to Judge Tolliver to decide the "knowingly" part), or breaking a written contract are both serious crimes in Junkyard. The absolute minimum punishment is to make restitution to the victim. This is usually accompanied by a few months at labor in the ghost rock mines or maintaining the city walls.

In extreme cases, the perpetrator may be banished. When this happens, the criminal is branded with a big "J" right in the middle of his forehead. He's then driven to the edge of Junkyard territory and dropped off with nothing but the clothes on his back and a waterskin or canteen. If the person is ever found inside Junkyard's borders again, he is shot on sight. This punishment is often also used in manslaughter cases, when someone accidentally causes another's death (outside of a bloodsport event—which is usually legal).

The law can be harsh in Junkyard.

Inner Junkyard

Inner Junkyard is the heart of the city. This is where the majority of the citizens live and work, where the industries that support the city are, and where wealthy travelers can find a roof to put over their heads.

The Inner Wall

Inner Junkyard is surrounded by the remains of the Skydome.

After the dome wall stopped glowing and it was once again safe to touch, some of the city's engineers looked it over. They discovered that many of its support structures had been severely weakened by the bomb blasts. The engineers concluded that if it wasn't taken down, it was eventually going to come down on its own.

Removing the Skydome was an ongoing project for the first three years of the city's postwar existence. Each of the dome's plates was laboriously disassembled by hand and then carefully lowered to the ground. The plates and their supporting beams were then dragged to waiting foundations where they were used to construct the outer wall and gates.

The bottom 20' of the dome was left in place, reinforced, and topped with a parapet to form the city's inner wall. This wall has a number of gates, each one where a main road left the dome prior to the war. The inner wall and gates are manned at all times. The towers and parapets of the wall have spook-juice-burning flame weapons and machine-guns placed at regular intervals.

Radiation Sink

As the dome was disassembled, the engineers found devices within the dome's structure which did not appear on the original plans. After some study, they decided that these gizmos were responsible for both the strange glow and for the sudden drop in radiation levels following the bombing. As near as the engineers and junkers who 've studied the devices can tell, it appears that the dome actually absorbed much of the energy from the bomb blasts and the radiation that followed. Where this energy went, nobody knows.

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Junkyard
1"= 200 yards
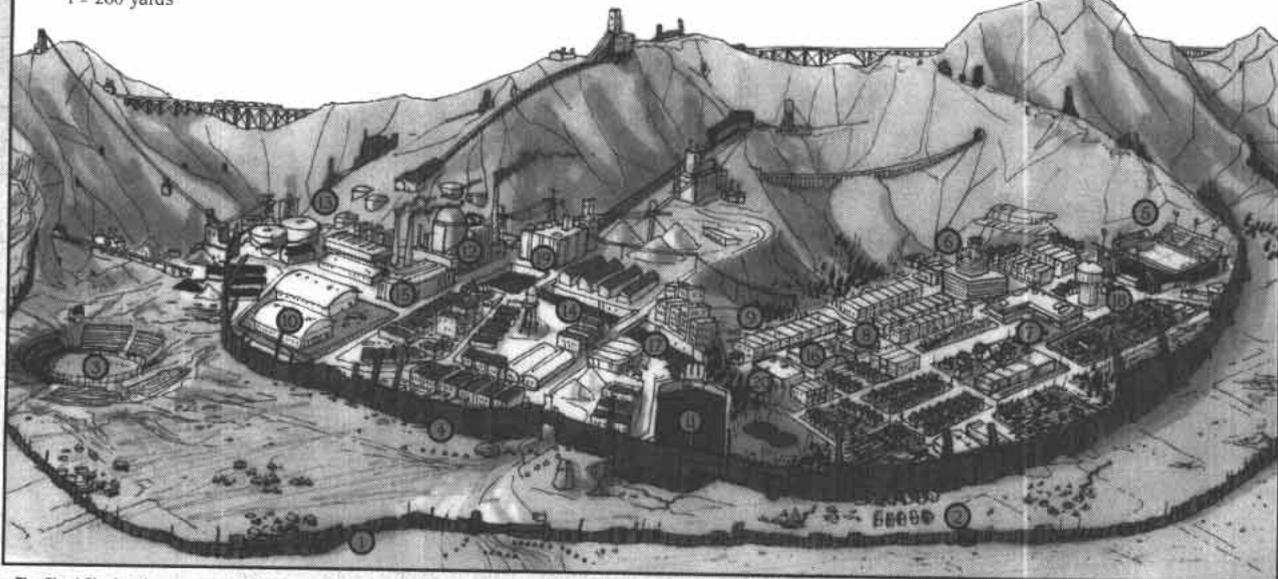
The Steel Sky has been removed for ease of viewing. Locations: 1. The Outer Wall. 2. The Market. 3. The Pit. 4. The Inner Wall. 5. Hellstromme Arena. 6. Town Hall. 7. Hellstromme High. 8. Hellstromme Library. 9. Junker Row. 10. The Junk Repository. 11. Taylor Reservoir. 12. The Power Plant. 13. The Refinery. 14. Sludge Creek. 15. Granny Smith's Arms Factory. 16. Junkyard Memorial Hospital. 17. Parts is Parts. 18. The Junkyard Hilton. 19. HVRD. 20. The Yard Arms Hotel

Food

Before I describe all the wonderful sights and sounds of Junkyard life (the smells, you can keep), I think it's necessary to discuss the food situation in the city.

Scorched Earth

In short, there is none—at least not homegrown. Something has happened to the soil around the city that has left it utterly barren and lifeless. Nothing grows in an area roughly five miles in radius around Junkyard. The only sign that anything ever did are a few leafless trees and occasional patches of brown, tinder-dry grass. It's dry and dusty when the sun shines and a muddy mess when it rains. Mud slides are common in wet weather.

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No one is sure what caused this. Some say it was the atomic blast from the bombs, others say it was a side effect of the energy shield, and still others claim it was caused by the ghost rock maelstrom that failed to form around the city. Regardless of what caused it, it means the same thing: Junkyard is dependent on outside sources for food.

The food stashed away in the Hellstromme Industries bunkers kept the early Yarders fed for nearly two years. By the time it ran out, Junkyard was being supplied on a regular basis by the gangs dependent on the city for fuel. Since that time, many small farms and cattle ranches have sprung up inside the city's 50-mile limit, and Junkyard began trading with the Convoy and the other nearby settlements. The city's food supply is also supplemented by rattler whalers, who I'll talk about shortly.

Siege

What this means for the average citizen is that food prices are higher in Junkyard than most other places in the Wasted West. What it means for Ike and the other city leaders is an enormous headache. The city maintains a well-guarded stockpile of grain, meat, and other food, but in the event Junkyard's trade contacts are cut off, this supply is only enough to last the 10,000 people living within the walls for a few months at best.

Soylent Green

I've heard that Doc Schwartz and his team of brainiacs are trying to solve this problem by growing soya beans in indoor hydroponics gardens, but the soya products he's produced this way haven't caught on with the public. Too many jokes about where the soy-patties *really* come from I guess. Although I suppose if people get hungry enough, they'll be lining up around the block for them.

East Junkyard

East Junkyard is the primary residential area of the city. It's also where you can find the shops of many of the individual craftsmen who sell their products in the Market. East Junkyard also has a wide variety of bars, restaurants, and hotels.

The Ledge

The Ledge is a cantina of legendary status in Junkyard. No less than 457 people have fallen to their deaths from this bar's sixth floor balcony in the 220 years the place has been in operation.

The Ledge can be found on the top floor of an old apartment building. In the bar's early days, patrons used to have to climb a six-story external staircase to reach the door, but in the late 1940s an elevator was installed. The decor inside the bar can best be described as "Early-American Broken"—due to the fights which frequently break out here. Very little of the furniture in the place hasn't been taped, nailed, or glued back together.

One of the reasons for these fights, and for the occasional customer taking a swan dive, is that the Ledge is popular with bloodsport gladiators. Once they get some alcohol in them, they tend to challenge each other to all sorts of stupid bets. The bets usually involve doing something on the balcony or in the Steel Sky surrounding the bar that would be dangerous even without half a fifth of rotgut in your bloodstream. Even if the bet doesn't kill somebody, the fight about who won the bet often does. My advice is, unless you can fly, look for your entertainment elsewhere—or at least stay off the balcony.

A typical night at the Ledge.

The Steamer

At one time the Steamer was a bar in the basement of one of the worst dives in Junkyard. It got its name from all the leaking steam pipes that ran through the bar. The place was damp, hot, foggy, and dark, but it was popular with those who were meeting people they shouldn't be seen with and those who wanted a breath of air that wasn't filled with soot.

The place has changed some since then. During the economic boom of the 1980s, the neighborhood around the bar went yuppie and it was bought out by some investment bankers looking for a tax shelter. They fixed the pipes, put in air conditioning, added a dance floor and some disco balls, and installed fog machines at strategic locations. The place is still dark and foggy, but you won't need to wring out your clothes after you leave. If you like to shake a leg, you can get down to the vintage tunes in the place's slug collection or you can just have a clandestine meeting in a dark foggy corner.

Tech Noir

This place is in with the junker crowd. It's a posh little cyber café and bar with lots of pulsating, eye-searing, neon signs on the walls. You can drink alcohol or choose from among the place's wide variety of "coffee" drinks (they're made from a coffee substitute synthesized from Doc Schwartz's beans). Each table has a terminal with Junk Mail access (see below), so you can cruise the web while telling your friends all about the latest piece of primo junk you picked up.

In the past few years, Tech Noir has also become popular with cyborgs.

The Afterburner

If you're looking for a hotshot pilot, this is your one-stop shopping place. This bar is popular with the Sky Pirates and many of the local flyboys. The patrons of this place ooze so much testosterone (even the women pilots), they make the old Disciples locker room look like a tea club.

While you're here, you should try the drink named after the bar. The Afterburner is equal parts whiskey and spook juice. You light the drink on fire and slam it down while it's still burning. It's an acquired taste.

Junkyard Hilton

After a long time in the wastes, this place is a little slice of Heaven. They've got clean sheets, maid service (full-service maids, if you know what I mean), cable TV (only one channel, KYRD), a lounge singer, and oh-so fluffy towels. They've also got a steep price: $150 a night

'Yard Arms Hotel

If you're on more of a budget, you might try the 'Yard Arms Hotel. The sheets are passable and the towels are hand-cloth-sized pieces of sand paper, but at least the roof doesn't leak. Unfortunately, the only thing that passes for entertainment at the 'Yard Arms is watching bugs the size of compact cars explode against the industrial-sized bug zapper outside the main office. A room here will run you $25 a night.

Hellstromme Arena

The arena is the primary source of entertainment in Junkyard. There are daytime skullchucker matches here Monday through Wednesday. On Thursdays and Fridays, the playing field is rearranged for swing matches. Most Saturdays are reserved for gladiator-style events. The arena is closed on Sunday, a holdover from the old blue laws that were in effect before Salt Lake City got vape-O-rized. The day off is usually used to make repairs and give the scrappers a day to recuperate.

The arena's schedule varies at night. Some nights more bloodsports are on the ticket, other nights old vid slugs are shown on the arena's massive display screens. There are also occasional concerts by some of the local bands like the Wastelords and the Reckoners. Admission to most events is $10, but prices for big events can be $25 or higher.

Darius Hellstromme Library

One of Hellstromme's saner pet projects was the library that bears his name. Before the war, this library housed the world's third largest collection of scientific and technical works. Now that Washington and Richmond are just so much glowing rubble, I suppose it houses the world's largest collection.

This six-story building (ten if you count the four basement levels) holds nearly 4 million volumes. About 80% of these books are also stored in data slug format. The remaining 20% are being carefully scanned and transferred to slugs by the library's staff—assisted by two members of our order who are also busy making copies of the library's entire collection for the Grand Library.

The library doesn't actually lend books. If a book you are interested in exists in slug format, you can have a copy made to a new slug for $20. If the book is one which hasn't been scanned yet, you can rent time to peruse it in the library for $5 an hour.

The Hellstromme library is a favorite hangout of the Gonzers (more about them in a sec). They spend hours every day poring over the collected writings of Hellstromme as if they are some sort of sacred text, looking for some clue as to when he will return.

More ⟹

Typical Prices

Item	Price
Ammo	$1-$2/bullet
Arena admission	$10—$25
Beer	$5/bottle
Cable service	$25/month
Electric service	$50/month
Ghost rock	$160/pound
G-ray service	$100+/month
Junk Mail service	$30/month
Junkyard Hilton	$150/night
Phone Service	$20/month
Rent	$300-$1200
Soy burger	$2
Spook Juice	$8/gallon
Steak, beef	$50
Steak, rattler	$20
Travel pass	$50/$100/$150
Whiskey	$2/shot, $10/bottle
Yard Arms Hotel	$25/night

Junkyard Memorial

At one time, Junkyard Memorial Hospital was one of the most advanced research hospitals in the world. After Hellstromme Industries pulled out of town, the hospital lost much of its funding and most of its best doctors, and care slowly deteriorated. By the time the balloon went up, the place was little better than most overworked, overcrowded, inner-city hospitals.

The hospital is still open today. It's run by a small but dedicated staff led by Doctor Maria Mendoza. Mendoza doesn't have sufficient people to staff the entire 1500-bed facility, so the upper four floors of the building have been shut down. The doctor is constantly begging Town Hall for additional funds to train more staff, but the looming conflict with the Combine means the militia gets the lion's share of the city's budget for now. Despite the shortage of trained personnel, care at Junkyard Memorial is good (although not always quick.) Unfortunately, the staff has gotten smaller recently.

Some orderlies who strayed onto the upper floors for some after hours recreation have vanished. A number of those who went searching for the missing orderlies also disappeared. As many as ten people are missing, and two are reported to have become gibbering lunatics. These disappearances have not been made known to the public—Mendoza is trying her best to keep things quiet. I only discovered the story of the missing orderlies after hearing some rumors and spreading some cash around.

Hellstromme High

This is yet another building that bears the famous scientist's name. It's the site of a free school run by another two members of our order, Librarians Loudon and Metzer. I've got to say, I have a lot of respect for these two. They run a school with nearly 300 students and only 6 teachers. They don't get any help or funding from Junkyard (although some of the 'Yard's wealthier citizens sometimes contribute money and supplies), and they often have to scramble to find ways to pay the instructors and get books for the students.

The school is free to anyone under the age of 18 who cares to attend, and most of the students are in their early teens or younger. The curriculum covers everything from basic reading and math to more advanced subjects like calculus and chemistry.

Loudon and Metzer have only one rule for their students: they have to want to learn. Troublemakers get tossed out on their ear. This has actually caused the two a lot of problems. Some of their most unruly students have been the children of some of the school's biggest benefactors and tossing them out has cost them money. Also, more than one disgruntled ex-student has come back to school looking to settle the score.

Just recently Loudon hired on a pair of armed guards to provide security for the school. He told me that some of his students are being harassed by gang members and that a few of them have disappeared. The militia has investigated, but the detectives have not turned up any leads. I asked around also, but the students seem to have completely vanished.

Town Hall

Town Hall is situated in the old Hellstromme Industries HQ. The tallest building in Junkyard, Town Hall towers a whole fifteen stories above the street. The upper nine stories are not visible from street level; they're obscured by the Steel Sky.

The lower two floors and a large portion of the basement are taken up by a museum commemorating the Battle of Junkyard. For $2 you can have a guide give you a room-by-room tour of the fighting for the building and the bunkers beneath it. Another $2 gets you an inspiring photograph of Ike manning the barricades outside the building.

Ike, Doc Schwartz, and other city leaders all have offices on the upper floors of the building, but they're rarely there. Most of their time is spent in West Junkyard overseeing vital construction and research projects.

The city offices open to the public are found on the third and fourth floors. I think most of the bureaucrats who survived the war must have flocked to Junkyard and moved in here. If you fill out all of your forms correctly and wait in line for a few hours, you may be waited on by one of the *terribly* busy people working here and allowed to renew your travel pass, apply for citizenship, sign up for electric, cable, G-ray, telephone, or Junk Mail service, or get one of a number of permits needed to open a business, purchase property, or modify an existing structure.

Junk Mail

The shield that prevented Junkyard's destruction also protected all of the electronic devices in the city from the bombs' EMPs. This means Junkyard has the highest concentration of functioning computers outside of Denver. One of the mainframes in the basement of Town Hall has been set up as a network server, giving the city its own mini-internet.

Anyone with telephone service and a computer can sign up for Junk Mail service. This service gives unlimited access to the server and can be used to send e-mail, surf the web pages of city businesses, place bets on upcoming bloodsport matches, and check the arena's weekly schedule.

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Lurkers

As urbane as many Yarders like to act, all is not coming up roses. There are still a large number of people who would rather let other people work, and then whack them on the head and take their hard-earned belongings. Despite the militia's best efforts, there are still portions of East Junkyard that should be avoided (the time of day doesn't really matter since it's always dark beneath the Steel Sky).

Many of these thieves are light-fingered pickpockets or simple whack-and-grab types, but the biggest threat comes from the "lurker gangs." These wahoos have been around since the early days of Junkyard, but over the years they have become stronger and more organized. These gangs lurk in the Steel Sky until some unsuspecting mark wanders by beneath them, then they drop down on ropes, bungee cords, and what have you, and relieve the poor victim of their valuables. In many cases, they also relieve them of their lives to avoid being identified.

Many of these gangs actually live in the Steel Sky, only coming down to spend their ill-gotten gain. The militia occasionally raids portions of the enormous pipe network, but these attacks usually only result in a lot of injured militia men and few arrests.

To help combat this problem, Town Hall is offering a bounty of $50 a head for lurker gang members. The only catch is that you must buy a lurker hunting permit for $100 at Town Hall (I kid you not). This is because only city employees are authorized to enter the Steel Sky and anyone else found there without one of these permits is considered a lurker.

The Old Rope Trick

People go missing all the time in Junkyard. Most of these are victims of the Moorlocks (more on them in a minute), but lately evidence has come to light that those from Down Below are not the only things plucking Yarders off the street. Witnesses have come forward describing people being yanked into the Steel Sky by long ropes.

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Investigations by the militia have yielded no clues as to the fates of these people, but rumors, supposedly started by those involved in the search, indicate that lurker gangs are probably *not* involved in these abductions. A $500 reward is offered to anyone who can solve this mystery.

Living in Junkyard

Those who are looking for more permanent living quarters can rent an apartment. Prices for these start at around $300 a month for a one-bedroom flat. They can go as high as $2000 a month depending on size, location, and the services included in the rent. To give you some sense of scale, most factory and city workers make around $600 a month and spend probably $200 a month on food.

The 10,000 souls living in Junkyard are only a small fraction of the city's previous population, which means many buildings are sitting empty. Those whose owners no longer live in Junkyard—for whatever reason—are considered city property. These derelict buildings, and everything in them, can be purchased from the city for $50,000 and up.

Not all Yarders can afford the high cost of food in the city.

The only catch is that buildings bought in this way must be restored and brought back up to code (as determined by Doc Schwartz and his city engineers) within two years, or the property reverts back to the city.

The Reclamation Project

Among their many other projects, city workers are busy reclaiming many of these abandoned buildings. Reclaiming a building basically consists of going into the structure and removing anything that might be remotely useful to the city's other construction projects. Besides the possessions of any previous occupants, this includes all wiring and plumbing fixtures, leaving behind only an empty shell. All of the material removed from these buildings is trucked over to the Junk Repository.

Looting an unreclaimed building is considered a very serious offense. The minimum penalty for doing this is making restitution for the stolen property and permanent loss of citizenship. Most people found guilty of this are also banished. In a few extreme cases, Judge Tolliver has ordered the offender executed.

Becoming a Citizen

Becoming a registered citizen of Junkyard is fairly easy. You must have a residence within the city limits (even if you don't spend much time there) and you must have two other citizens vouch for you. If your application for citizenship is accepted, you need to cough up $1000. In exchange, you get your fingerprints put on file at Town Hall and a set of crinkly-new citizenship papers.

Junker Row

Junker row is the strip of buildings that connects East and West Junkyard. As you may have guessed from the name, it's primarily inhabited by junkers.

If you can't find what you're looking for at the Market, this is the place to come. Most of the junkers who live here have workshops attached to their living quarters; others don't have anything which could be considered "living" quarters, they just live in their workshops. Either way, most have a selection of their gizmos for sale, and the vast majority do custom work for a price.

An auction at Parts is Parts.

If you need a piece of custom equipment built, you'd better have plenty of cash available. These things don't come cheap, and 99.99% of the junkers require a minimum of half payment or more in advance. Too many of them have been burnt by brainers commissioning work and then disappearing from sight. Of course, this can work to the buyer's benefit. Most junkers who've been around for a while have a closet filled with bizarre gadgets that have never been picked up that they'll sell for a song—provided you have a use for a missile launcher with a built-in back massager.

Body Docs

Some of the most popular (and expensive) junkers are the ones who deal in cybernetic systems. There are body docs who only build the equipment, others who only install it, and full-service ones who do both. Some require cash up front, but others are willing to work out financing for the equipment. You have to watch out for these second type, because under Junkyard law, they are within their rights to repossess the equipment if you miss a payment. "Repossess" means a bunch of thugs working for the doctor jump you and remove the unpaid-for systems—forcibly if necessary.

If you don't mind paying a little extra, I suggest going to Doc Edna's. She requires cash on the barrelhead, but everyone I've talked to says she does quality work. She even offers a six-month warranty on all systems built and installed by her. This warranty applies only to malfunctions caused through normal wear and tear. If you show up in her office with a bunch of 7.62 slugs in your shiny new arm, she'll have a good laugh at your expense and have one of her apprentices fix it at her normal repair rate.

By the same token, steer clear of Doc Simpson (all junkers who deal in this stuff are called "Doc," I think). He's cheap, but you get what you pay for. I've also heard that a lot of the equipment he has for sale has had many previous owners.

A few body docs, like Doc Edna, have a complete surgery in their offices, but most of them rent time in the Junkyard Memorial operating rooms. This costs about $100 an hour, and the cost for this is passed along to the patient.

Part is Parts

A big attraction for techno-mages is Parts is Parts. This is a privately-owned component warehouse that takes up nearly an entire city block. It's owned by Mary Beth Booker—"MG" to her friends because of her love of all things that go boom, especially machine-guns.

Parts is Parts has a wide selection of "premium junker components." To my untrained eye, the main floor of the warehouse looked as if a large tornado had just blasted through a junkyard, but judging from the excited noises all the techno-geeks were making, I guess the place does really stock some premium stuff.

MG employs professional scavenger teams to scour the wastes for particularly choice items. Junkers can even "order" special parts. This means the next team to go out spends some time looking specifically for the requested items. This service usually costs upwards of $100 per item category.

Whenever one of MG's teams brings in a really choice piece of junk, an auction is announced for the following day. Being at one of these auctions is kind of like swimming with sharks in a pool of bloody water. At the auction I attended, I saw a mild-looking egghead, who couldn't have weighed more than 100 pounds soaking wet, rip the ear off another junker who had outbid him for a fire-control computer. A number of the techno-mages around me muttered something about "gun spirits," but they wouldn't explain themselves when I asked.

With all the junk lying around the warehouse, I figured it would be fairly easy for junkers to just pocket the smaller items and walk off with them. I asked one of the staff about that, and she said that Monticello keeps an eye on things. I eventually got her to explain that Monticello was the hearth spirit that inhabits the warehouse, to which I replied, "Oh, of course, that's what I thought." Evidently "Monty" controls a number of machine-guns mounted strategically around the building as well.

G-ray Service

Just this past year, yet another project was undertaken by the busy Doc Schwartz and crew. A salvage team brought a large load of irradiated ghost rock in, and Doc decided that Junkyard **130** was in need of a ghost-rock reactor.

Most of Junker Row has been wired up for G-ray service. Hooking up to the service costs $100 a month plus $1 per G-ray over 1000 used. Nearly every junker worthy of the name is hooked to the service, and there are plans to extend the hookups to the rest of the city.

There are a few obstacles in the way of this plan, though. Number one is that there is some significant public opposition to the idea. Junkyard is already highly dependent on its resident junkers for its existence. Many ordinary citizens are concerned that the G-ray service will only increase this dependency as people start buying more and more junker-built gadgets for their homes.

The other obstacle is that not all of the bugs have been worked out of the G-ray generation process. The high levels of spiritual energy flowing through the main trunk lines tend to attract all sorts of strange critters and other weirdness. Whenever there is a problem with the lines, which is fairly often, the workers sent to fix it have to be escorted into the Steel Sky by a militia patrol.

Instant Experts

The last place I visited while in Junker Row was Instant Experts. This place was run by two junkers, Thomas and Earl.

This pair has an old, military-grade, teaching machine and an extensive **130** library of skill slugs. For a fee, you can rent time on the machine and learn nearly any skill from small-engine repair to brain surgery. This instant knowledge isn't cheap though. The going rate is $200 an hour and it can sometimes take a few *days* to absorb their more advanced offerings.

You also need an appointment. They have only one machine, which runs 24 hours a day—except for when it's down for repairs. At the time of my visit, the machine was booked up for the next four months solid.

Tom and Earl pay to record skills they don't have in their library. (They've already got every conceivable weapon skill known to man. So unless you're really, *really* good with a weapon, they're only interested in unusual skills. At the moment, they're paying top dollar for skilled plumbers and electricians)

One last thing, your fee is nonrefundable—even if the skill doesn't "take," or in the rare event that you suffer a brain embolism.

West Junkyard

West Junkyard is the industrial muscle of the city. This is where the big factories that employ most of the city's population are located, and where the city's essential services like power and water are administered.

Sludge Creek

This stream runs through the center of West Junkyard. It was originally named City Creek, but the runoff from the mines and factories surrounding it **131** quickly transformed it into a dark, slow-moving, toxic cesspool. Over the years, people, especially the homeless who camped along the creek's banks, often disappeared in the vicinity of the creek. It became obvious that some sort of creature was inhabiting its dark waters.

Efforts were made to clean the creek up, and by the 1950s its waters were again flowing clear. The disappearances ended at about this time, but the bones of hundreds of missing people were found in the mud dredged from the creek's bottom.

When things took a turn for the worse following Hellstromme's departure, the many abandoned factories along the creek's banks began to seep waste into the water once again. The creek again lived up to its name, and once again, people began to disappear along its banks.

Despite efforts by the militia and concerned citizens to find and destroy the menace behind these disappearances, people continue to go missing in this area. Cleaning up the creek is an eventual goal of the city government, but other projects have much higher priorities.

Taylor Reservoir

Taylor Reservoir (renamed in Ike's honor shortly after the Battle of Junkyard) is the source of all Junkyard's water. Some water flows into the reservoir from Sludge Creek (it's not as bad as it sounds—the water passes through a high-tech water purifier designed by Hellstromme himself), the rest is pumped up from aquifers deep beneath the city. The reservoir is heavily guarded to keep Combine saboteurs away.

Just this past year, the city was without water for nearly three days. Some crazy managed to slip past the guards and polluted the water with toxic chemicals. The entire reservoir had to be drained and refilled.

The Junk Repository

The Junk Repository is another heavily-guarded site. All junk which is collected at the city's money exchanges, as well as salvage brought in by militia patrols and reclamation teams, is stored here. All of the items brought here are sorted by type and quality and catalogued by the staff.

The Repository itself is a pair of enormous warehouses surrounded by tall razor-wire-topped fences and armed guards. The area around the repository is always brightly lit, and I'm told guard dogs roam the warehouse floors at night.

Anyone can come here during normal business hours (9 to 5) and redeem their widgets for junk. The one drawback to this system is that unauthorized personnel are not allowed in the actual warehouses. You must fill out a form requesting the items you'd like, and then wait while the crack warehouse staff gets right on it after their lunch/coffee/smoke breaks. More often than not, the clerk will inform you that there is no item of that description in stock, or that due to short supplies, the requested item is deemed more valuable than originally quoted when the request form was turned in.

The Repository also serves as a central supply house for the city engineers. Materials needed for city construction projects are requisitioned directly from the salvage stored here.

Granny Smith's Arms Factory

This weapons factory was started by an old Mormon widow way back in the 1870s. It struggled at first, but once Deseret became an independent nation, Granny's factory became one of the major suppliers to the Nauvoo Legions.

The factory was busy during the Last War cranking out the D-20—a modified version of the standard Northern Alliance assault—for the Nauvoo Legions. Since the end of the war, the factory has continued to produce small numbers of these rifles for the Junkyard Militia, but the majority of its production has been switched over to manufacturing and reloading ammunition.

Granny Smith's is the only known ammo-producing factory outside of Denver. The ammo made here is sold in the Market and is one of Junkyard's biggest exports—second only to spook juice.

If you're looking for some quick change, Granny's pays 2¢ a piece for spent shell casings.
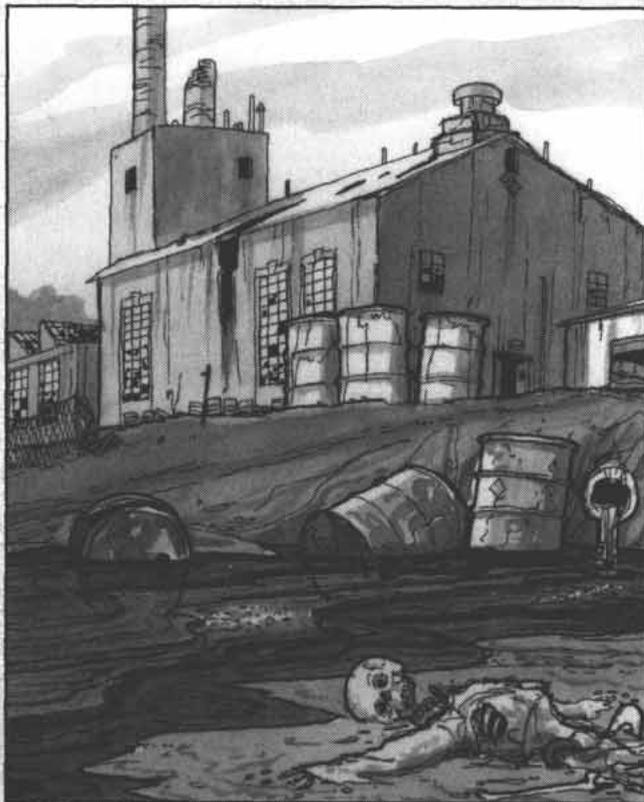
People continue to disappear along Sludge Creek.

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The Refinery

This place holds the very lifeblood of Junkyard. Without the spook juice manufactured here, the city would slowly shrivel and die. There would be no power, no running water, and most importantly, no food, if it weren't for this ghost-rock-based fuel. Spook juice manufactured at the refinery is stored in underground tanks and piped to pumps at the Market for sale.

Because of its importance, no one can get within 200 yards of the place without proper ID. The sentries guarding the place have orders to shoot any unauthorized personnel on sight and without warning. They take these orders very seriously; more than 20 people have been shot on the refinery grounds. Some were innocent, some were kooks, and some were actual Combine saboteurs.

The Mines

Equally important to Junkyard's survival are the ghost rock mines in the mountains surrounding the city. These mines provide the essential raw material from which spook juice is made.

Nearly 20% of Junkyard's population work in the mines. Some work voluntarily, others are sentenced to time in the mines as punishment for a crime. The professional miners get paid an average of $600 to $700 a month.

The mines run 24 hours a day. At the beginning of each shift, the incoming miners ride the oreways—gigantic conveyor belts—up to the mines, and then those they relieved ride the belts back down.

Despite modern equipment, the mining is still dirty, backbreaking work. The mines in the Wasatch Mountains were considered tapped out back in the 1950s. At the time, it had little impact on Junkyard's operation because the bulk of the ghost rock used by the factories was already being shipped in by rail from the Maze. The deposits being mined now are ones which were considered "economically unfeasible" back then, either because they were too small, or because they were located in unstable formations where the threat of collapse was great.

Cave-ins are common, and more than 100 miners die every year up in the mountains. There's also not enough filtration gear for everyone, so cases of black lung and ghost rock fever are a frequent occurrence.

Miners ride the oreways to work.

Like the refinery, the mines are guarded heavily. Militia patrols walk the mountains around the mines and motorized units patrol the bases of the hills.

Bad News

I asked Gabe, a junker who I'd struck up a friendship with since coming to town, what would happen if the spook juice refinery was destroyed. Could Junkyard get by on only ghost rock alone?

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He thought it pretty unlikely. For starters, internal combustion engines can run on spook juice, but not ghost rock. All essential equipment would have to be converted to steam power to use ghost rock directly. Secondly, a few ounces of ghost rock can make many gallons of spook juice. Burning the rock directly is wasteful and would probably exhaust the city's reserves of the fuel in a few months. Lastly, once the reserve is gone, the output from the mines is only a fraction of what's needed by the city on a daily basis.

The reason this scenario concerns me is that I'd heard rumors from various sources that the production of the mines had dropped slightly during the past year. Some blamed it on cave-ins, and others blamed it on the bad weather that blocked up a few mines with mud for weeks, but there a few people who believe it's due to the fact that the ghost rock is running out for real this time. I don't know what the truth is here, but given the importance of Junkyard to the Wasted West's future, and the Library's projections, I thought it important to mention.

Both the mines and the refinery are obvious targets for a first strike by the Combine. Ike and Doc know that, and they're working on ways to defend against such an attack.

The Power Plant

Another place with lots of armed guards is the power plant. This place uses spook-juice-fired generators to generate all of the city's electricity. This is also the site of Junkyard's new G-ray reactors. The proximity of these reactors to the rest of the city makes many Yarders nervous.

Electrification

The generators used to provide power to a city more than twenty times its current size. Ike and Doc want to put this excess generating capacity to use, and are making plans to repair the power lines between Junkyard and the survivor settlements in Provo and Ogden. This would give Junkyard another commodity to trade for the food produced by these settlements (and make them even more dependent on Junkyard).

As part of this plan, city workers have been sent to the Kennicot Copper Mine, about 20 miles southwest of Junkyard. They have begun repairs on the mine and it won't be long before it begins producing the copper needed to manufacture the wire required for the project.

KYRD

Junkyard has its own cable TV station, KYRD. The station primarily broadcasts movies from old vid slugs and some new ones from Movie Town, but it also has a morning and evening news program, and a few low-budget, home-brewed shows. The most popular of these is a kid's show called "Uncle Junky."

The show follows the misadventures of the title character, a whacky junker who's always blowing himself up. The show is totally mindless, but it's actually kind of amusing if you find exploding people and sudden blows to the head funny. Maybe I'm just an ignorant jock, but I find it hilarious.

Down Below

There's one part of Junkyard that I didn't get to see during my visit: the area most 'Yarders refer to as Down Below.

Down Below is the city's two sub-levels. These had been mostly abandoned before the war as the city's population dropped, and they became a refuge for criminals and the homeless. After Judgment Day, Ike realized that there was no way his small force of militia men could possibly patrol these enormous areas, so the roads and walkways leading down to these levels were sealed with

enormous concrete plugs. A few of the entrances were equipped with gigantic blast doors to allow the militia a way to enter these levels when needed.

The militia doesn't actively patrol Down Below, but they do occasionally send expeditions down there whenever Moorlock abductions get out of control or they have reason to suspect that Combine operatives or other threats exist down there. Most of these patrols go just inside the entrance, shoot a few Moorlocks, and then come up back up and pose for pictures with KYRD camera crews.

Not all expeditions go this smoothly, though. A company of nearly 100 militia chased a group of Combine saboteurs down to Sub-level Two about two years ago. The last transmission from this patrol was, "Enemy in sight. Attacking." They were never heard from again. Search parties sent to look for them found only a couple of burned-out vehicles, some pools of dried blood, and lots of empty shell casings.

Moorlocks

Yarders refer to the inhabitants of Down Below as Moorlocks, just like in that old H.G. Wells novel. And, just like in *The Time Machine*, the Moorlocks come to the surface from time to time and snatch people.

Although all of the known entrances to the sub-levels have been sealed, many surface buildings have unauthorized entrances in their basements. Most of these were built by the crime syndicates that ruled Junkyard just before the war to allow their people to come and go as they pleased. They're now used by Moorlock hunting parties.

The Moorlocks come to the surface for one simple reason: food. There is nothing to eat Down Below except for other Moorlocks and the occasional well-preserved Twinkie, so they occasionally come up and grab some tasty surface-dweller meat off the street.

By all reports, the living conditions Down Below (if you want to call them that), are horrendous. Power to the sub-levels has been cut off and all of the vents for the air filtration systems have been plugged. It's perpetually dark and the air is thick enough to choke you. The only source of water is runoff from the surface which manages to drip its way down from old, leaky pipes.

According to those who have descended into the depths and returned, there are many tribes of Moorlocks Down Below. The tribes war against each other and eat those who fall in battle. Some tribes are composed of normal, but feral, humans, others consist entirely of mutants, and some are a mix.

The Junkyard government offers a $50 a head bounty for Moorlocks. Moorlocks on the surface are fair game, but if you want to go hunting them you need to shell out $100 for a license. Brainers with a license are allowed to pass through the militia entrances and hunt them on their home turf.

Down Below Tours

Most wasters who go Down Below looking to make a few quick bucks end up in some Moorlock's stew pot. One of the exceptions to this is Buck Masterson (if that's his real name). Buck runs a company called Down Below Tours. For a fee of $200 a head, he leads hunting expeditions into the sub-levels.

Buck guarantees each tour member will bag a Moorlock or they get a full refund. In addition, the tour members get to collect the bounties for any Moorlocks they do kill. In the past three years, Buck has led over 50 expeditions into the sub-levels and he's only lost 10 customers.

The Hellstromme Tunnels

Many of the Yarders I talked to about Down Below told me an interesting story. Rumors abound that way down deep, below Sub-level Two, there is a secret complex of bunkers and tunnels built by Hellstromme Industries. According to people who "know someone who has been down there," this complex is guarded by a small army of automatons, combat spiders, remote turrets, and the like. A few of these secondhand accounts even claim that they caught a glimpse of Dr. Hellstromme himself down there.

I can't vouch for the accuracy of these tales, but the sheer number of them suggests that there may be some kernel of truth to them.

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The Junkyard Militia

No report on Junkyard would be complete without taking a look at the city's armed forces. Officially called the Junkyard Militia, most 'Yarders refer to them as the Jammers (J.M.ers, Jammers, get it?). Of course, this has led those critical of the militia to calling them 'Jamas or PJs.

I couldn't get exact numbers, but the militia maintains a full-time force of roughly 800 to 1000 people. These men and women double as both soldiers and police. Besides guarding the city walls and vital installations like the refinery and power plant, about a quarter of the militia is deployed outside the city at all times, patrolling the 50-mile limit and guarding border checkpoints.

Most of the militia are armed with D-20 rifles from Granny Smith's. They're provided with ammunition by the city, but any armor or extra weapons they wish to carry are paid for by the individual soldiers. A new recruit in the militia makes only $300 a month, but gets free room and board in the city barracks.

The Jammers are a highly motorized force. Most of their vehicles are modified street vehicles, but they do have a small number of scavenged military vehicles including Hummers, APCs, and a pair of M-26 Powell hovertanks. They've also got a decent selection of junker-built vehicles, but these are normally kept under wraps to prevent Combine spies from learning their capabilities.

The Fuzz

All crimes in Junkyard are investigated by the militia. Minor crimes like theft are handled by the beat patrols, while major crimes like murder are investigated by an overworked group of 30 or so Detective-Sergeants.

Crimes can be reported at the militia offices in Town Hall, or you can just dial 911 if you have phone service.

The Secret Police

More than one person has told me that Ike maintains a small secret police service that answers only to him and Doc Schwartz. This is one rumor I'll leave intentionally unconfirmed. Asking too many questions on a subject like this usually ends up with your questions being answered in unpleasant ways. According to those in the know, this secret police force has eliminated more than one of Ike's enemies and keeps tabs on anyone suspected of activities "detrimental to the operation of the city."

General George

The militia is commanded by a grizzled veteran of the Last War named General George Douglas. Douglas was a general in the Nauvoo Legion during the war. Unlike the other Mormons, who disappeared to parts unknown after the shooting stopped, he decided to stick around.

General George, as his troops call him, could hardly be called devout though. He can drink men twice his size under the table, and when he gets riled, he can curse a streak that would make a trucker blush. By all accounts,

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General George Douglas

he's a gifted tactician, who's viewed with a mixture of fear and awe by both his troops and his enemies.

The Reserve

All citizens of Junkyard are required to serve two weeks a year in the Reserve. This means there are usually about 300 reservists on duty at any given time. While on active duty, the reservists are given weapons training and used for crowd control, street patrols, and guard duty at non-vital locations like the inner wall and Town Hall. In an emergency, like a Combine attack, all reservists are liable to be called to active duty. Reservists are paid $50 a week while on active duty.

Citizens who are out of town when their active duty rotation comes up are left a notice at their place of residence. As soon as they return to the city, they are expected to report in at Town Hall and begin their service.

Alliances

Despite the impressive size of Junkyard's militia, it's questionable whether it's strong enough to resist a full-scale assault by the Combine. No one really knows the true size of Throckmorton's legions, but Ike's preparing for the worst. Part of these preparations include allying with other survivors.

Junkyard has signed alliances with the survivors in Ogden and Provo and with a number of road gangs. The biggest of these gangs are Mort's Marauders and the Blood Slicks. In exchange for spending six months a year patrolling the area around the city, these gangs get all the free spook juice they can carry and free ammo while patrolling.

The most impressive alliance Ike has negotiated, though, is the one with the Sky Pirates. These ex-raiders are now a vital part of the Iron Oasis' defense. I'll discuss them in some detail in a moment.

Upcoming Treaty?

Although unconfirmed, I've also heard rumors that leaders of the Templars and Joan's Doomsayers may soon be coming to Junkyard to discuss a formal alliance between the city and these groups. If these stories are true, it could be a significant setback to Throckmorton's dreams of conquest.

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A junker faces off against a crowd of Luddites.

Who's Who

Let's take a look at some of the movers and shakers in Junkyard.

Ike Taylor

Ike is "The Man" in Junkyard. He's well-liked by most of the population, and few have questioned his leadership. By all reports, though, those who have, have met with unfortunate ends. This gives a sinister edge to Ike's image as a down-to-earth man of the people.

Due to his potentially key role in humanity's future, I thought it would be a good idea to meet this man and see if I could get a feel for the "real Ike." Shortly before I left Junkyard I pulled out my Librarian regalia and arranged an appointment with the city's savior.

Librarian's Note: The full transcript of the interview with subject Ike Taylor can be found in file JY 102.1.

I took an instant liking to this tall, lanky, balding man. Ike answered my questions in a blunt, plain-spoken manner, and although he could easily have dressed in an expensive suit drawn from the salvaged clothing in the Repository, he wore an old Hellstromme Industries uniform with his name stitched on the shirt. Unlike many of the other political types I've talked to since becoming a Librarian, Ike's "common man" image didn't seem like a calculated act.

To my surprise, Ike fully answered all of my questions. He freely admitted that some of the things he's done since becoming Junkyard's leader could be viewed as tyrannical, but he stands by them. Ike feels personally responsible for those living in the city, and he's determined to do whatever it takes to ensure their safety. "There may be people better qualified to run this place," he said, "but I got handed the job, and you don't go changing horses in midstream. Once that bastard Throckmorton has been taken care of, I intend to step down and allow free elections. Until then, though, do it my way or watch your butt."

Doc Schwartz

Doctor Bernard Schwartz was a research scientist with Hellstromme Industries. Now he's the power behind the throne in the Iron Oasis. Doc is one of a rare breed: he was a junker *before* the Last War.

I met Doc while at Town Hall for my meeting with Ike. He's an older man in his late sixties with an amiable and somewhat befuddled demeanor. I suspect that at least some of his absentminded professor routine is just an act to cause his rivals to underestimate him—his piercing gaze doesn't seem to miss a single detail.

Doc is the mastermind behind Junkyard's city engineers. The engineers are a collection of civic-minded junkers and traditional scientists and engineers working to make life in Junkyard better through technology. Some of the engineers perform research, but most of them spend their time in the field overseeing the many city improvements like the electrification, reclamation, and G-ray service projects.

The Junkers

Junkers hold a special place in Junkyard society. Although it's the labor of the miners and factory workers that create the things needed to keep the city running on a day-to-day basis, it's the junkers on whom the city's survival ultimately depends. It's junkers who make the spook juice that is Junkyard's number one trading commodity, and which runs the city's generators, pumps, and militia vehicles. It's also junkers who make the cyberware used by everyone's favorite gladiators and who build and maintain the futuristic weapons that defend the city against air attack.

Although junkers are often feared or despised in many other places, in Junkyard they are often treated like royalty. This is due in part to the city's dependence on their creations and the fact that most of the wealthiest people in the city are junkers. Junkers have quite a bit of influence with the city government, and a number of prominent techno-mages (other than Doc Schwartz) serve as informal advisors to Ike. (Whether he wants their advice or not. I got the impression from Ike that he has more than had his fill of some of them.)

Dimitri Karkos

Dimitri Karkos is one of these self-appointed advisors. He's also one of the wealthiest people in Junkyard. Karkos owns a number of factories in West Junkyard and operates a junker workshop in Junker Row. Although a talented techno-mage in his own right, he leaves most of the work to his employees and apprentices and spends his days out pressing the flesh and poking his nose in city business.

Karkos is fairly free with his widgets; he often sponsors free public festivals and bloodsport events. His big pockets have gained him a fairly large following with the public. If mayoral elections were held tomorrow, Karkos would be the hands-down winner unless Ike decided to run, and even then, it would be a close race.

Despite his charming public image, I've heard that he is often quite different in private. I talked with a few of his employees over beer at Tech Noir, and once they had loosened up some, they told me that Karkos often flies

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A Gonzer worship service.

into rages at the slightest provocation and he has even occasionally attacked members of his staff.

Reformed Luddites

Of course, not everyone in the city loves junkers (I'll spare you the lengthy sociological babble on why this is, you can thank me later). The biggest group of junker haters is the Reformed Luddites. These jokers are an offshoot of the Neo-Luddite movement in Nebraska, but they're not quite as hard core as their cornbelt brethren. They have no problem with modern technology, just devices made by junkers. They believe that the spirits techno-mages use to work their mojo are evil, and that anyone using a device built with them risks losing their soul to the spirit. They refuse to use junker devices or ride in vehicles fueled with spook juice (although I noticed most had no problem using electricity generated with spook juice).

The Reformed Luddites are led by a woman named Julia Richards. Her stated goal is to rid Junkyard of junker influence by the end of the decade. She organizes regular rallies to "raise awareness of the junker menace." A number of attacks on junkers have been traced back to the group, but the militia has not cracked down on this group like it has on many others. I suspect Ike is keeping them around to counterbalance the techno-mages' influence.

Guardians of the New Science

Events since the end of the Last War have unhinged more than a handful of people, but these boneheads give the insane a bad name (not an objective assessment, I know, but these guys give me the creeps).

The Guardians of the New Science, or Gonzers as most Yarders call them, worship Hellstromme as some sort of divine being. They've combined portions of the Bible with Hellstromme's writings to create a bizarre theology that only they seem to fully understand. As far as I can tell, the Gonzers believe that the doctor is some sort of savior figure. Although there are many people who believe that Judgment Day was

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the end of the world foretold in Revelations, the Guardians believe that the end of the Last War was the beginning of a Time of Tribulation. At the end of this time, Hellstromme will return in the sky in a chariot of light and call to him all those who have remained "technologically pure." Once he has gathered his faithful, the doctor will banish the Reckoners from the Earth and establish a technocracy that lasts for a millennium.

For the Gonzers, technological purity is measured against the writings of Hellstromme. Those who disagree with any of the doctor's theories are considered heretics. Unlike the Neo-Luddites, however, the Guardians are a peaceful group who try to convince the impure of the error of their ways rather than burning them at the stake. Members of the order can be found on the street corners of Junkyard nearly every day delivering their message to the masses.

The reason the Gonzers give me the creeps is that nearly all members of the order have taken a vow of silence. They communicate with others through small digital displays they wear around their necks. These gizmos seem to be directly connected to their brains in some way and display text as fast as the "monk" can think. They also seem to allow the Gonzers to communicate through some sort of direct mental link. There is something unsettling about watching a bunch of hooded figures huddle together, share some silent laughter, and then go their separate ways. It makes you wonder what they're up to.

The Gonzers "preach" by wearing large, flat-screen monitors that display colorful, multimedia messages from Adrian Kellam, the order's founder. Kellam was a brilliant research scientist with Hellstromme Industries before the war. What prompted him to start this cult of technology is anyone's guess. He rarely appears in public except for his occasional trips to Town Hall to harangue Ike and Doc Schwartz about obtaining access to Hellstromme Industries Headquarters—the Gonzers' most holy of sites.

The Guardians maintain a temple outside of Junkyard in the ruins of the Smith & Robards compound. Most of this place was levelled by the bombs, but much of the underground portion of the facility is still intact. The group has also purchased a number of Hellstromme buildings inside the city. These are maintained by small numbers of mute priests.

A source of conflict between the Guardians and the leaders of Junkyard is the Hellstromme HQ. This is considered a holy site by the group, and they wish to build a temple in the building, but the techno-cultists have been denied access to the building. At least once a week the Gonzers stage a peaceful protest outside Town Hall.

Because Hellstromme began a junker training program shortly before the Last War began, Gonzers consider junkers to be their misguided brethren. They actively try to recruit the techno-shamans into their group. This has led to more than one clash between the Guardians and the Luddites. Most of these battles have been quickly squashed by the militia, but at least one Gonzer has died, and a number of people on both sides have ended up in the hospital.

The Worker's Alliance

The last float in the crackpot parade is owned by the Worker's Alliance. These bozos seem to have forgotten the fact that there was a little nuclear war a few years back, and that they're lucky to live in a place where it's actually possible to have a job and get paid for it. Most people outside of Junkyard are busy trying to find their next meal and keeping their bodies unpunctured, and these yahoos are complaining about low pay and long hours.

The Worker's Alliance, led by Gregor Ilyanich, is a socialist group out to "better the lot of the working man." The core of the organization is a number of Russian ex-soldiers who served with the Southern Alliance in the Last War. Evidently the demise of communism in their homeland over 100 years ago hasn't discouraged them, because they are trying to establish a new "worker's paradise" right here in Junkyard.

The Alliance at first began by simply trying to get the miners and factory workers to form a union, but once that failed, the group turned violent. They went underground (literally, they

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have a hidden headquarters somewhere Down Below) and began waging a terrorist war against Junkyard's government. They have attacked militia patrols and government buildings, and just recently they were thwarted in an attempt to blow up the power plant.

This group is high on Ike's hit list. Hellstromme Industries employees never once unionized in the company's long history. Hellstromme pulled this off by making sure all of his employees received good pay and benefits and by ruthlessly crushing the first sign of any attempt by the workers to organize. As an ex-Hellstromme foreman, Ike also holds a strong anti-union position, and he's determined to crush the Alliance before they can stir up any real trouble among the Junkyard workers.

Rattler Whalers

There's one group that all Yarders are happy to see: the rattler whalers. When the whalers pull into town it means, for a short while at least, that you can get a nice juicy rattler steak without having to hock your cyber eye. Rattler meat is a major source of food in Junkyard, and when prepared correctly, it's delicious.

Rattler whaling started back in the 1870s, but died out after some moron got the rattlers placed on the Endangered Species list. Junkyard's fleet of landships was scrapped, but a few were kept around for "scientific expeditions" to study the creatures. If you've ever watched any of those animal shows on cable I'm sure you've seen footage of these expeditions. You know, "Tonight during Rattler Week, watch as Jane—clad only in a chainmail bikini—waits next to a staked-out cow to observe the feeding habits of the fierce Mojave rattler."

Every once in a while the rattler would snarf Jane down along with the cow and the ratings would go through the roof. I always gave a little cheer when that happened, because I figured the human gene pool had become just that much better.

A few of these "scientific" landships survived the war, and they now hunt the rattlers for food. The biggest and most successful of these ships is the *Spirit of Junkyard*, captained by Sid Olinger. This beast is over a hundred yards long and has a crew of 150. Its top speed is only 10 mph. That's okay, because it doesn't need to outrun anything—its armored sides bristle with all sorts of heavy weapons. The ship is big enough for ultralights and helicopters to operate off its roof, and it uses these to scout for rattlers.

As important as rattler whaling is for food, it also makes travel around Junkyard safer. The rattler population has grown tremendously since the end of the Last War, and attacks near the city are a frequent occurrence.

Bloodsports

You'd think as an ex-football player, I'd love bloodsports. Not so. There's a big difference between the adrenaline rush you get from slamming a quarterback into the ground so hard that he's got to pick turf out of his facemask, and the one you get in a life-and-death situation. Maybe I've seen too much pain and killing, or maybe I'm just getting old, but I just don't see the attraction. Be that as it may, bloodsports are one of the prime types of entertainment in the 'Yard.

The point of bloodsports (with the exception of dueling) is not to kill your opponent, but it does happen. Killing another scrapper is not a crime—most of the time. The call is left to the audience. Whenever a death occurs, the spectators vote whether it was an "accident" or not. Thumbs up, and the gladiator gets away with it; thumbs down, and the player is off to see Judge Tolliver.

Skullchucker

Skullchucker is somewhat similar to football. Two teams line up and try to get a skull into their opponent's goal. Unlike football, though, there are no penalties and very few rules. In the original game, the contestants were allowed some armor, but no weapons. The current rules allow the players to use non-bladed, unpowered weapons; clubs and weighted chains are the most common.

The skullchucker league in Junkyard has six teams that play on a regular basis: the Screamin' Demons, the Skullcrushers, the Screamin' Skulls, the Bum Rushers, the Slaughterers, and Death Incarnate. The Skullcrushers have been the 'Yard champs for the past four years, and their forward, "Bones" Beamer is hailed throughout the city as one of the best players of all time (he wouldn't have lasted a week in the NFL).

Besides regular matches, the clubs also play exhibition games against visiting teams. These are usually teams put together by some gangers who are in town and think they can play with the big boys. These matches are usually slaughters, but the Convoy has two teams that play when they're in town that are pretty good.

Swing

The basic object of swing is to be the last team with a member still swinging. The game was originally played with players harnessed to portions of the Steel Sky, but that changed once the sport was televised. Due to the irregular nature of the piping, it was often hard to get cameras in the best spots to catch the action, so the promoters moved the sport to the arena and built custom platforms for the players to swing from. Over the years, these platforms have become increasingly elaborate, allowing for some truly dizzying maneuvers by the players.

The game is usually played with four-person teams. The players are allowed knives and other bladed weapons. By the rules, these are intended only for cutting the opponent's harness, but it's fairly common for a player to "miss" the rope and "accidentally" slice his opponent open.

There are four swing teams in Junkyard, and like the skullchucker teams, they play exhibition matches against outside challengers. The four teams are the Pipe Monkeys, the Flyin' Knives, the Hangmen, and the Cyber Swingers. The Hangmen, led by their star enforcer Sarah "Slice" Solomon, are the current 'Yard champions. The loss of their lurker, Billy Ray Billings, to one of Doc Edna's repo teams means it's unlikely they'll claim the championship again this year, though.

Dueling

This is a new "sport." There are a lot of armed people walking the streets of Junkyard, and shootouts between them are common. The militia cracks down hard on these, but they still occur. Dueling was legalized to cut down on the number of innocent bystanders caught in the crossfire of these personal pissing matches. As long as all parties involved agree, they can settle their differences in the arena in front of a paying crowd. Killing someone in one of these duels has absolutely no legal repercussions. The only restriction is that only handguns are allowed.

Of course, this has led to professional gunslingers who make a living in the arena by taking on all challengers. The reigning champ is a cyborg who goes by the name of "Sarge." Sarge has killed over forty people. After his tenth victory, the arena began offering a purse to anyone who can defeat him. It started at $10,000 and $10,000 has been added to the purse after each duel, so it now stands at $310,000.

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Two gladiators go at it.

The Law Dogs

If you ask me (not that anyone will), the true heroes in Junkyard are these guys and gals. Law Dogs travel the wastes, often alone, and try to restore some law and order to the chaos of the post-Judgment Day West.

Junkyard has become a regular stopping place for many of these selfless lawmen and women. Besides being a place where they can rest up, heal their wounds, and replenish their supplies, it has also become a good place to pick up the trail of the desperadoes they are chasing. Due to the city's amnesty policy, lots of hard cases pass through Junkyard on a regular basis. Law dogs can often find the person they're after here, or at least find someone who knows where their target is.

Although the peace officers aren't allowed to arrest their suspects inside the city, a number of them have found a way around this. They simply confront their targets in a public place and challenge them to a duel in the arena. Most of these chuckleheads are too

Cole Ballad on the job.

macho to refuse a challenge in front of an audience, so the Law Dog gets to gun them down without breaking the amnesty law. In the rare cases when a criminal is able to keep cool and refuse the challenge, most Law Dogs try to find out where the target is headed, leave town before their target does, and simply wait just the other side of the border for them. When I came to Junkyard, there were three Law Dogs at the border checkpoint I passed through. They were each waiting for different gangers to leave town.

The JLA

A few Law Dogs have formed a loose organization to coordinate their efforts. The Junkyard Law Association was started by Spencer Vaughn, an ex-sheriff from Grand Rapids, Colorado. The JLA rents a small office in East Junkyard. The office staff maintains a database of wanted criminals, their crimes, rewards offered for them, and their last known locations. Members of the JLA ($50 a year membership fee) have unlimited access to the database; non-members must pay $5 per criminal researched. Supposedly, the money generated goes to pay the staff and the rent.

Surprisingly, many Law Dogs are unwilling to join the association. The few I spoke to said it's not because they distrust Vaughn, but because they're afraid of the group becoming a political force that will interfere with their law enforcement efforts. (It sounds to me like there are a lot Dirty Harrys out there who don't want anyone to cramp their style.)

Cole Ballad

Of course, the number one Law Dog in Junkyard is still Cole Ballad. This muscle-bound hero is definitely of the shoot first, don't ask questions school. His dedication to his work has nearly gotten him banned from Junkyard. He's come dangerously close to violating the city's amnesty deal on a number of occasions and more than one criminal he's set his sights on has "mysteriously disappeared" while in the 'Yard. The militia investigated these disappearances, but no evidence linking Cole to them has ever been found.

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Outside Junkyard

There are a number of small farming communities inside Junkyard's 50-mile limit. Most of these number less than twenty people each, and in some cases they are just a single family that has refused to leave its farm. All of these groups come to Junkyard to trade the food they grow for other necessities. In addition to these small groups, there are also two large survivor settlements nearby.

New Provo

New Provo is a settlement of about 100 people living on the outskirts of the Provo ruins. Provo wasn't hit by any nukes on Judgment Day, but it had been heavily bombed with conventional weapons by the Southern Alliance and it was close enough to Salt Lake City that it suffered some collateral damage from the bombs that hit there, mostly in the form of EMP.

The people living in New Provo farm what they can and sell the surplus to Junkyard. In return, the city provides a garrison of about 30 militia to protect the town from raiders. The town is led by a man named Joe Cullum.

Near Ogden

Ogden wasn't quite so lucky; it caught a ghost rock bomb. Almost all of the city is trapped within the bomb's swirling maelstrom. The 50 or so people who live here don't attempt to go into the city anymore; everyone who has entered the storm has never returned—not even the

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Templar and the posse that went looking for the first scavengers to go missing in the city.

Like New Provo, the people of Near Ogden spend most of their time farming and raising cattle. They also do some logging in the Wasatch National Forest. All of their surplus production goes to Junkyard. Near Ogden has a garrison of 20 Jammers.

The people of Near Ogden are excited about Doc Schwartz's plan to run power lines to the town. Not only will it give them lights, heat, and whatnot, but the citizens also hope to reopen one of the ski resorts in the mountains east of the city.

Militia Farms

Junkyard also maintains a number of small militia farms within its territory. These farms are run by the militia, but most of the work is done by prisoners sent there by Judge Tolliver. Most of the output from these farms is stockpiled in the city's warehouse to use as a reserve in case of a siege.

Despite the militia farms and the food from Near Ogden and New Provo, city leaders are still worried about providing food for the city in the event of a siege, or even large scale raids against the trade caravans that come to Junkyard. The fairly dry climate of the area has become even drier since the end of the war, limiting the amount and types of crops that can be farmed, and making it difficult to find sufficient grazing land for large cattle herds. Unless Doc Schwartz can make a go of his hydroponics plan, Junkyard is going to remain dependent on outside sources for food. This is probably only going to get worse as time passes, because the city's population is growing faster than new trade partners are being found.

Kennicot Copper Mine

One of the world's largest copper mines, the Kennicot should provide more than enough material for Doc Schwartz's electrification plan—provided the city engineers can ever get it reopened.

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Although they haven't been acknowledged by the city government, many stories are circulating around about the trouble the engineers are having in getting things rolling out there. Workers have disappeared, equipment has been damaged, and a few workers have been killed in unexplained accidents at the site. At first it was thought to be the work of Combine saboteurs, but the militia thoroughly searched the mine and found nothing. Despite this, the unexplained events continue to occur.

Morale among the workers at the site is low, and unless someone can get to the bottom of things out there, the electrification project may have to be abandoned for the foreseeable future. Many of the workers have come to believe that the place is cursed, and some have already refused to work there.

The Sky Pirates

One of the most significant allies Junkyard has made to date is the Sky Pirates. There are a lot of people (myself included), who believe that without this alliance the Combine would have made its move against Junkyard much earlier.

Rocky Mountain High

The reason this alliance is so important is a simple one: any full-scale attack launched by the Combine has to cross the Rocky Mountains—and when it does, the Sky Pirates will be there to greet them.

If Throckmorton attempts to detour around the central passes controlled by the Pirates, his forces will be spotted long before they ever get to Junkyard, and they'll be harassed by the Jammers and their road gang allies every step of the way. If the attack force actually reaches the city in good enough shape to fight, it's do or die time for the Combiners because there is no way they can be quickly reinforced or resupplied. Detouring to the south also risks interference by Oil Town and the 3rd Armored Regiment (Oil Town regularly trades motor oil and other lubricants for junker tech from Junkyard).

The most direct route of attack is to go straight over the Rockies on Route 70, but to do that, the Combine needs complete air superiority over the mountains. Without it, small groups of defenders could bottle up an attack force indefinitely in the narrow passes. To make a rapid advance this way, Combine raptors need to be able to scout the passes unmolested.

Throckmorton's only other option is an airborne assault, but without air superiority, any attack of this kind would probably degenerate into a turkey shoot as the Sky Pirates blast the slow-moving transport helicopters and airplanes.

Basically what all this strategizing means is that before Throckmorton can attack Junkyard, he's got to eliminate or otherwise neutralize the Sky Pirates—and being cocky SOBs, the Pirates are daring him to go ahead and try.

Origins

Before I talk about what the Sky Pirates are up to today, I should say a few words about where they came from. They weren't always popular, high-flying heroes. The story I'm about to tell you should be taken with a grain of salt—I got it from some flyboys who were partying at the Afterburner.

The Mile-High Club

The Sky Pirates formed not long after Judgment Day. Most of the original Pirates were members of the Mile-High Aviation Club (no, not *that* Mile High Club), a group that specialized in flying ultralights, gliders, and other light aircraft. Many of them had built their own craft from scratch.

What with a war going on nearby and all, the Mile-Highers hadn't been able to do much flying. After the bombs dropped, some of the group got together and decided that they'd go for one last group flight while there was still some fuel to be had. While they were buzzing around the foothills, they spotted some deserters attacking a column of refugees. Some of the pilots made a few low level passes, hoping to scare the attackers off, but the soldiers opened fire on the aircraft and shot down one of them.

The aviators retreated, and after a quick conference on the radio, they zipped back to their airfield. There they raided the explosives shed of a contractor who was building a new runway and grabbed a few cases of dynamite. A few of them also snatched guns out of their cars and trucks. Armed now, they mounted back up and returned to the scene of the battle.

They arrived too late to help the refugees, but not too late to avenge their deaths. The enraged pilots bombarded the deserters from above with explosives, sending them running for cover. The survivors of the Mile-Highers' first bombing run returned fire and two ultralights went down. After ten more minutes of fighting, another aircraft was lost and all of the raiders were dead or wounded. The surviving pilots landed their light craft nearby and moved in to finish the deserters off.

They weren't prepared for what they found. They discovered a survivor among the deserters' victims who told them what transpired after the pilots first appeared. The refugees had surrendered shortly after the planes left. The soldiers lined up all the men in the group along the shoulder of the road, shot them, and then had their way with the women. Anyone who tried to resist was brutally beaten, and a few were shot. After hearing the survivor's story, the crusading pilots made short work of the wounded deserters.

Flying Avengers

For most of the Mile-Highers, this was their first taste of what post-bomb life was going to be like. Most of them had never been in combat before, and they found it scary but exhilarating. Right then and there most of the group decided they wanted to do what they could to make sure things like they had just witnessed didn't happen again.

The group changed its name to the Sky Pirates (they figured, and rightly so, that the name Mile-Highers wouldn't inspire fear in a cowardly gerbil), bolted the dead deserters' weapons to their crates, and began looking for wrongs to right. The Pirates patrolled the area around their airfield and I-70 west of the Rockies on a regular basis. With all the refugees traveling the highways in the weeks following the war, the do-gooding pilots were in constant demand.

As months passed, word of the flying guardians spread. Soon new recruits began appearing at the airfield wanting to sign up. The group tripled in size in less than six months. The new pilots and aircraft gave the Pirates more firepower, but they also meant new headaches. It soon became hard to find enough food and fuel to keep pilots and planes going. The group was forced to ask some of the nearby survivor communities for contributions. These towns contributed willingly at first, but the Sky Pirates' success worked against them. As biker gangs learned to stay away from the group's patrol area, the townspeople began to doubt their need for the aviator's protection and became stingier with their donations.

Trouble in Paradise

The nature of the group changed as it grew. Many of the new recruits were in it simply for the action or the loot. They wanted to be more aggressive and expand the squadron's patrol area and allowed targets. Some of the original Mile-Highers began to doubt the wisdom of opening the group to outsiders, and a few of the early members left during this time.

As supplies ran short, splits appeared in the group. Many of the more hot-headed members wanted to force the towns that were supporting them to cough up the goods as a "tax," while others thought the Pirates should move on to greener pastures. The squadron's leader at the time, Ed Conley, was hard-pressed to keep many of his pilots from throwing down against one another, but he somehow managed to hold the group together. Unfortunately, before he could come up with some sort of solution to his flyers' problems, Lady Luck stepped in and kicked him in the teeth.

It's rumored that the Pirates have a number of military jets.

Loma

Friction between the Pirates had just about brought things to a boil, when a call came in from a scout plane near Loma that a large pack of bikers was headed toward the town. The squadron's tanks were topped off with the last of the fuel at the airfield, and the Pirates headed out to investigate.

By the time the squadron was over Loma, the bikers had already begun their assault on the town and the townsfolk were calling frantically for help on the radio. The Pirates dived down out of the sun and attacked. The battle lasted for nearly an hour, but at the end, the few remaining bikers turned tail and ran.

By the time the shooting stopped, many of the Pirates' craft were running low on fuel. They landed just outside of Loma and asked the townspeople to share some of their ethanol so they could make it back to their airfield. To the pilots' surprise, the people they had just saved refused, claiming they had just enough for their own needs.

Major Dwight Price aka Raptor.

This set the hotheads among the Pirates off, and a shouting match started. Ed Conley stepped between the two groups, trying to calm things down, and got shot in the chest for his troubles. No one is sure who fired that first shot (or so they claim), but it sparked a firefight between the pilots and the town. In the end, Loma was leveled from the air, and the Sky Pirates got the fuel they wanted.

Flying Bikers

Things changed quickly for the group after that. More of the original members left, leaving the fire-eaters in charge of the squadron. Travis "Fur" Ball became the group's new leader. Ball was one of those who felt the towns they protected should pay "tribute," and once he took charge, that became the group's policy. Towns that didn't pay up were bombed until they had a change of heart or they were destroyed.

Of course, as with most petty dictators, the tribute paid by the frightened townspeople was never enough. Ball constantly wanted more. His demands eventually became so outrageous that he killed the golden goose; the survivors in the Pirates' patrol area began moving away or fighting to the death against impossible odds. Soon there weren't enough people left in the region to support the squadron.

That's when the Sky Pirates really began to live up to their name. Instead of staying in one place, the squadron began to migrate around the West, hopping from one small airstrip to another. Wherever they went, they attacked towns, trade caravans, and isolated homesteads, and took what they wanted. They quickly became one of the most feared gangs west of the Rockies.

The dreaded aviators cut a bloody swath from the Rockies to the Great Maze and back again, with a pack of Law Dogs and vengeful survivors struggling to keep up with the high-flying marauders. Junkyard offered a $10,000 reward for Fur Ball's head, and a $1000 a head for the other gang members. Despite all the people gunning for them, the group actually grew during this period, gaining new pilots and aircraft from the areas the squadron passed through.

Rock and a Hard Place

The Sky Pirates found themselves in a tough situation. They could head west again, through territory that was already hostile to them, and hope to stay one step ahead of everyone who wanted their heads on platters, or they could go east over the Rockies, fight their way past the Combine, and raid the Great Plains for a while. The only thing they couldn't do was stay where they were.

The members of the gang were split on the issue. Ball vaccillated back and forth. The huge bounty on the leader's head prompted a few of the gang to take a try at claiming it, and although he survived their attacks, he became paranoid and withdrawn just when the squadron needed real leadership. Ball had a few pilots killed just because he suspected they were plotting against him, and many of the rank-and-file began grumbling (although not very loudly).

The Raptor Man

That's when the Raptor, otherwise known as Major Dwight Price, USAF, Ret., made his move. He'd joined the gang shortly after they'd returned to the Utah/Colorado area, and he'd gained the trust of many of the pilots. He offered the gang a third choice. If they followed him, he'd ensure they received amnesty for their crimes and lead them to a place where they would have all the supplies they could want.

The gang quickly divided into two camps, one supporting Raptor and the other supporting Ball. Before the lead started flying, Raptor challenged Ball to settle their differences in single combat. The gang leader couldn't back down from a public challenge, so he accepted.

The two got in their planes and engaged in a dogfight that lasted for over a half hour as each of them jockeyed for position. Ball's patience eventually ran out and he stalled his plane in an overly aggressive maneuver. That gave Raptor the opening he was waiting for. He nearly sliced Ball's plane in two with the long burst of machine-gun fire he walked through his opponent's craft.

The Purge

After taking control of the gang, Raptor led the Pirates to a small cache of fuel, ammo, and food at a remote airfield high in the foothills of the Rocky Mountains. He told the pilots that he could get them more supplies if they continued to follow him. Under his direction, the group blocked the roads and trails leading to the strip, then settled in to wait. A few Law Dogs with posses from Junkyard attempted to storm the place, but they were easily beaten back. Raptor forbid the Pirates from chasing down and exterminating the fleeing attackers.

Once the first winter storms closed the mountain passes, Raptor set about reshaping the squadron. He formed a group of bodyguards from pilots he trusted—many of whom were some of the original Mile-Highers—and then he began removing members of the gang he felt were beyond redemption. He killed nearly 20 pilots in air-to-air duels before the rest of the undesirables got the message and began leaving on their own. Those who left voluntarily were allowed to keep their aircraft, but were warned that they would be killed if they ever returned.

The Amnesty

Just before the spring thaw, Raptor flew down to Junkyard with Ball's head in a mason jar, trailing a white banner behind his plane. He met with Ike and the other city leaders and made them an offer. In exchange for a complete amnesty for himself and his men, the Sky Pirates would serve as the city's own private air force. Although it caused a huge uproar throughout the 'Yard—at the time, the Sky Pirates were more hated than Throckmorton and his goons—Ike agreed to the deal.

Of course, not everyone felt bound by Ike's bargain. The Sky Pirates had to deal with occasional attacks by Law Dogs and other vigilantes for years to come. Eventually, though, the squadron's actions proved their sincerity and won over most of their enemies. The pilots are now considered heroes by most people, and their exploits are routinely chronicled on KYRD.

The Sky Pirates Today

It's been nearly eight years since Raptor first took over control of the squadron. The size of the group dropped sharply after his purges, but once the Sky Pirates' image turned around, new recruits—including some of the Mile-Highers who had quit years before—began to swell the squadron's ranks. No one outside the Sky Pirates knows for sure how big the gang is now (except for maybe Ike and Doc Schwartz), but most estimates put the number of pilots at well over 100, plus at least as many support crew.

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The Sky Pirates have been actively recruiting new members. Each spring, a group of Pirates comes to Junkyard to interview prospective recruits. Those who get past the interview are formed into a training squadron that operates from Junker Field—a small airfield outside the city walls created from equipment salvaged from HI International. Only about 30% of the newbies graduate from this tough training and actually become members of the squadron.

The Skyships

The biggest change Raptor has made in the group (besides getting rid of the psychopaths and sadists) is to upgrade the squadron's equipment. The gang has scoured the countryside looking for serviceable aircraft they can add to their hangar. Although ultralights are still the most common mount of the Pirates, they have added a number of larger aircraft to the squadron including a massive C-10 Andromeda cargo plane. It's rumored that the group has also gotten its hands on a number of high-tech military jets, but no one outside of the group has seen these.

The most impressive pieces of new equipment the Sky Pirates have acquired are the Hellstromme airships. These massive, heavy-lift dirigibles were originally built to help in the construction of the skydome over Junkyard, and actually lifted many of the large dome sections into place. Once the project was completed, the ships were reconfigured as passenger craft and used as company shuttles and for promotional activities.

The original airships have long since been retired, but Hellstromme maintained a fleet of six of these enormous craft from that point on. The Sky Pirates have recovered three. One is thought to be in Denver. The other two were in major cities on Judgment Day, and they are believed destroyed. One of the ships used by the Sky Pirates, Sky Raider II, disappeared under mysterious circumstances; only Sky Raider I and the Black Sunday remain.

The airships used by the Pirates have been heavily modified; they now sport numerous gun turrets, and have hangar decks which can hold up to eight ultralights. They are used for long-range patrols and for hauling crippled aircraft back to base for repairs or to be chopped into spare parts. The ships have a crew of about 40 Pirates and they often carry a few light vehicles onboard for the crew to use while landed.

The Secret Base

A few years after Raptor worked out the amnesty deal with Junkyard, most of the Pirates moved out of the airfield they had been using and disappeared to a new base somewhere deep in the mountains. No one outside of the squadron knows where this new base is, and the Pirates mean to keep it that way.

All of the central Rockies are off limits to non-Pirate aircraft. Any aircraft not belonging to the gang is liable to be shot down without warning. The squadron maintains regular patrols of this area and a number of SAM launchers have been hidden in the valleys. If you venture in here, whether by air or on foot, expect to be shot at and count yourself lucky if you get a warning first.

Even new recruits to the squadron don't know where the base is. The ones who make it through the training course at Junker field are taken up to the Pirates' old base in the foothills. They must serve there for a year before they are allowed near the secret facility. I guess Raptor figures a year is long enough to figure out if someone is a Combine spy or not.

There's a lot of speculation as to where the new base is, but most of what I heard seemed like so much hot air. I doubt anyone other than Ike or Doc has any real idea.

Raptor

Not much is known about the Pirates' leader other than that he was an officer in the US Air Force during the Last War, and that he runs a tight ship. He demands a lot from the men and women under his control, but he gets results. When they're in a partying mood, the Pirates are some of the wildest wasters I've ever met, but once they get up in the air, they're all business. I went to a few air shows before the war, and nothing I saw there came anywhere close to some of the spectacular flying I saw while watching the Pirates train outside the city.

Patrols

At the moment, the Sky Pirates are trying to avoid any pitched battles against the Combine so as to conserve their strength for when Throckmorton makes his move. Right now the squadron is recruiting and training new pilots, and looking for weapons and aircraft which can compete against the Combine's high-tech equipment.

Pilots who are looking for action volunteer for long range patrols. The squadron routinely patrols along the edge of Combine territory to keep an eye on what the Black Hats are up to. This is especially important since patrols detected that Throckmorton had reopened the uranium mine in Uravan, Colorado. Many people are concerned about a possible nuclear attack on Junkyard.

A number of patrols have not returned recently. Since the missing patrols were not all lost in the same place, it's thought that the Combine may have gotten some jet fighters operational.

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Scouts

The Sky Pirates maintain even longer range patrols to keep up to date on the goings-on around the Wasted West. The best of their new recruits are given an ultralight and sent out to explore the wastes. These scouts are expected to return to Junkyard at least once a year and make a full report on what they've encountered in their travels. Casualty rates among these intrepid adventurers are nearly 50%.

A Sky Pirate on patrol.

The Plot

I'm going to have to cut my visit to Junkyard short.

While roaming the hills outside of town, I uncovered evidence of a plot to overthrow Ike's government. I think I was spotted, so I don't think my chances of getting back into the city and warning Ike are too good. I'm going to make a run for it and try to get this information back to the Grand Library. Then we can send a message out with one of our other Librarians or maybe flag down a Sky Pirate scout and give him the message. Wish me luck.

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Librarian's Note: The remainder of this message has been classified "Eyes Only" by the Head Librarian. All references to this plot will be removed from the document prior to making the information in this report available to the public. No information has been received as to Librarian Knudsen's whereabouts, and we have not received any communications from him. As per Head Librarian Liebowitz's instructions, another Librarian has been dispatched to Junkyard to warn the government there of the threat and to make inquiries about Librarian Knudsen.
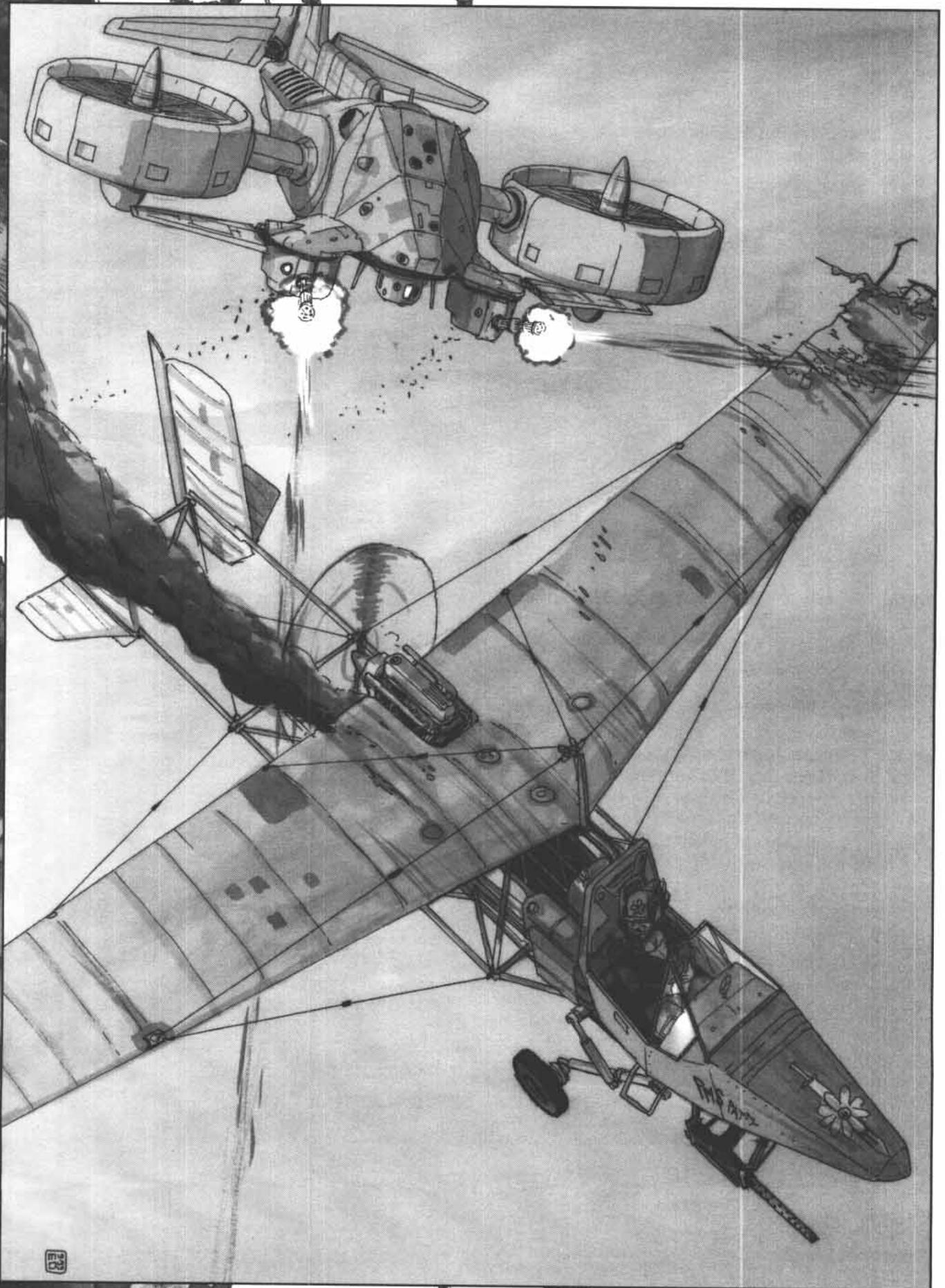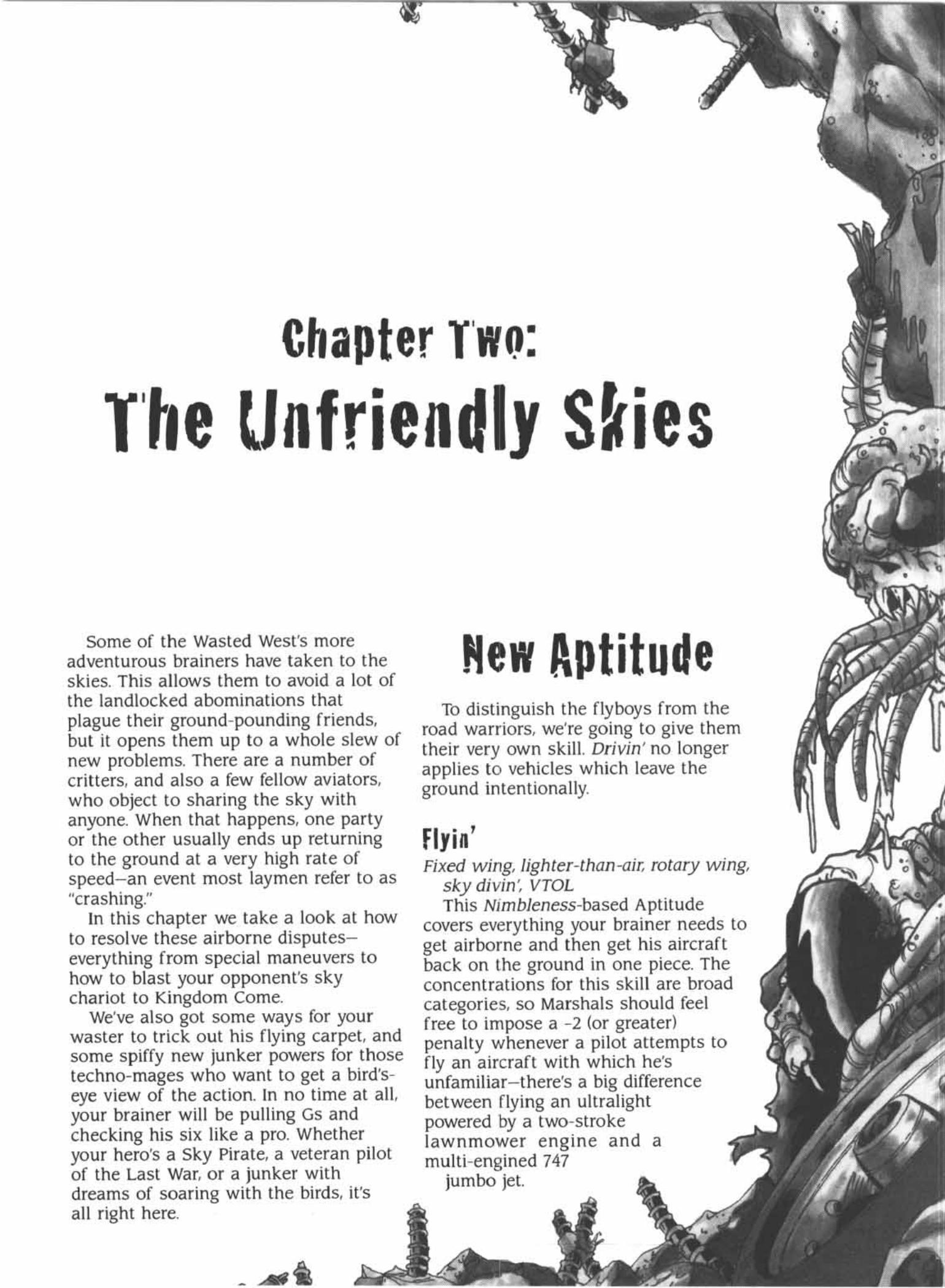
Chapter Two:
The Unfriendly Skies

Some of the Wasted West's more adventurous brainers have taken to the skies. This allows them to avoid a lot of the landlocked abominations that plague their ground-pounding friends, but it opens them up to a whole slew of new problems. There are a number of critters, and also a few fellow aviators, who object to sharing the sky with anyone. When that happens, one party or the other usually ends up returning to the ground at a very high rate of speed—an event most laymen refer to as "crashing."

In this chapter we take a look at how to resolve these airborne disputes—everything from special maneuvers to how to blast your opponent's sky chariot to Kingdom Come.

We've also got some ways for your waster to trick out his flying carpet, and some spiffy new junker powers for those techno-mages who want to get a bird's-eye view of the action. In no time at all, your brainer will be pulling Gs and checking his six like a pro. Whether your hero's a Sky Pirate, a veteran pilot of the Last War, or a junker with dreams of soaring with the birds, it's all right here.

New Aptitude

To distinguish the flyboys from the road warriors, we're going to give them their very own skill. *Drivin'* no longer applies to vehicles which leave the ground intentionally.

Flyin'
Fixed wing, lighter-than-air, rotary wing, sky divin', VTOL

This *Nimbleness*-based Aptitude covers everything your brainer needs to get airborne and then get his aircraft back on the ground in one piece. The concentrations for this skill are broad categories, so Marshals should feel free to impose a -2 (or greater) penalty whenever a pilot attempts to fly an aircraft with which he's unfamiliar—there's a big difference between flying an ultralight powered by a two-stroke lawnmower engine and a multi-engined 747 jumbo jet.

Flyin'

Aircraft use the same basic movement rules we described in *Road Warriors* with a few added twists to account for the three dimensional nature of flying. We're going to quickly review some of the basic concepts of the movement rules here, so those of you who are already familiar with them might want to skip ahead to the section on maneuvering on page 59. If you haven't read *Road Warriors* (we *will* find you), read on.

Continuous Actions

To smooth out the movement of vehicles across the battlefield we've added the concept of continuous actions. A continuous action is one which, once begun, continues indefinitely until interrupted or ended by the character performing the action.

Like most other actions, a continuous action requires an Action Card to perform. During the round in which the action begins, the card on which the action starts fulfills this requirement. Once this card is spent, the action begins and continues for the remainder of the round unless stopped by the character or enemy action.

A continuous action may be maintained into a new round, but this requires the character performing the action to immediately sacrifice his highest Action Card of the new round. This is done before any actions are resolved. Sleeve cards may be spent to fulfill this requirement.

If a hero has cards remaining after paying to maintain a continuous action, he may perform other actions on these cards just like he normally would. All such Aptitude rolls made while performing a continuous action automatically receive a -2 modifier, however—except for rolls made for the continuous action.

Continuous Flyin'

The reason for all that rules lawyerese above is that piloting an aircraft is considered a continuous action. The basic effect of this is that characters flying an aircraft each have one less action per round because they have to pony up their highest card each round to continue piloting. However, on each movent phase (take a look below), your waster can attempt a piloting maneuver for free, without spending an Action Card.

In situations in which a combat breaks out with all of the vehicles involved already in motion (a fairly common occurrence), assume that all of the pilots (and drivers, if ground vehicles are involved) began their piloting action on a previous round. This means they need to cough up their highest card at the beginning of the first combat round to continue flying.

Movement Phases

To smooth out vehicle movement, we've added five movement phases to the standard combat round (these don't effect pedestrian movement at all). Each of these phases is roughly one second long. Just to be completely unoriginal, we've numbered them 1 through 5. During each movement phase, every pilot who paid a card for a continuous *flyin'* action gets an opportunity to make a flying maneuver without having to spend an Action Card, and each vehicle moves.

The movement phases occur after certain cards in the action order, as shown on the Movement Phase Table on the next page. On each of these cards, after all character actions have taken place, conduct a movement phase. All vehicles move in order from fastest to slowest.

It's the beginning of the turn, and Bob, flying an ultralight, has paid his highest card to continue his *flyin'* action from the previous round. He, and other characters with Aces (or the Red Joker or sleeve cards), take their actions in the usual order. After all character actions are done,

the first movement phase occurs. Bob can attempt a flying maneuver for free, and can use a sleeve card to attempt a second one if he likes. The Marshal moves all enemy vehicles, and then it's on to Kings as usual.

Moving Stuff

All vehicles are moved in each movement phase, regardless of whether the pilot has any Action Cards. A vehicle always moves in a straight line unless the pilot performs a maneuver or the vehicle goes out of control. A pilot can attempt one such maneuver in each movement phase at any point in his vehicle's movement.

Basic maneuvers (simple acceleration, braking, and steering) generally require no roll, and like other simple actions can be combined with a second maneuver. More sophisticated maneuvers call for *flyin'* rolls. As mentioned above, a flyboy who needs to make an extra maneuver can do so if he's got an Action Card up his sleeve and he uses it to perform the maneuver.

Vehicles move in order from fastest to slowest. Ties are resolved by comparing the pilots' highest remaining Action Cards or, if there is still a tie, a contest of *flyin'* (the winner of which may decide whether or not to move his aircraft first).

The Air Speed Indicator

So how far does your hero's crate move each phase? We knew you'd ask that, and we're prepared. If you take a look at the Aircraft Record Sheet provided at the back of the book, you'll see a column of numbers running down the left side of the page.

This is used to keep track of your aircraft's speed. The numbers in the first column show the vehicle's speed in miles per hour (mph). The smaller number to the right of that is how many inches the aircraft's counter moves each phase (to convert to yards, simply multiply the inches by 5). As your hero increases or decreases the throttle, or the aircraft's speed changes due to maneuvers, slide a paper clip up and down the column to the appropriate spot.

You may notice that the highest speed listed is 200 mph. What do you do if your rocket jock's ride goes faster than that? Easy. Just leave one paper clip at 200 mph and clip on a second one that shows how much faster than 200 mph the aircraft is going. When it comes time to move your plane, simply add the listed movements for the two speeds together. Very few aircraft operating in the Wasted West can top speeds of 400 mph, but if this happens, simply add another paper clip.

There are also some numbers listed with a "+" in front of them. These numbers only apply to maneuvers made while the aircraft is still on the ground. See page 65 for details.

Movin' Too Fast

Occasionally, a vehicle's speed may be radically altered while it's in the middle of moving (due to a collision, damage, or other catastrophe). If the vehicle has already moved a distance equal to or greater than that listed for its new speed, its movement for the phase immediately ceases.

Bob's ultralight is buzzing along at 60 mph, which means he moves 6" per movement phase. After moving 5", he is hit by an attack that drops his speed to 40 mph. Since vehicles traveling at 40 mph only move 4" per phase, and Bob has already moved 5", the ultralight's movement for the phase ends.

Movement Phases

Phase	Card
1	Ace
2	Queen
3	9
4	5
5	Deuce

Aircraft Types

Before we discuss all the fancy tricks your hero can try, let's take a quick look at the various types of aircraft your brainer might see in the Wasted West.

Fixed Wing

This category covers everything from ultralights to jumbo jets. These aircraft all have some sort of wing and create lift by moving forward. As air passes over the wing, its shape causes an area of low pressure above the wing. The difference in air pressure between the upper and lower wing surfaces lifts the plane into the air. The faster the aircraft moves, the more lift it generates.

Fixed wing aircraft must continually move forward if they want to stay airborne. All of these planes have a stall speed: the speed at which the wings stop generating lift and the aircraft starts to fall. This is a bad thing and it's discussed on page 64.

Lighter-Than-Air

This category covers flying vehicles which float through the sky because they are literally lighter than air. This includes things like hot air balloons and blimps. All of these aircraft have a large gas bag which is filled with a gas that is lighter than the atmosphere around the vehicle. In most cases this is heated air or helium, but those with a death wish sometimes use hydrogen (remember the Hindenburg?) due to its superior lifting power.

LTA vehicles don't have to maintain a minimum speed to stay airborne, but they do have to worry about springing a leak.

Rotary Wing

The rotary wing category includes helicopters, and to a lesser extent, autogyros. These aircraft are all equipped with a disk of wing-shaped rotor blades. Rather than depending on the vehicle's forward motion, the aircraft's engine whirls the blades in a circle to create lift. The amount and direction of the lift is controlled by changing the pitch and tilt of the blades.

Altitude

Once an aircraft leaves the ground, it's necessary to keep track of its altitude. Like movement, altitude is measured in inches, where each inch equals 5 yards of height above the ground.

There's a place along the bottom of the aircraft record sheet to track this. The three sections of the track represent the vehicle's altitude in ones, tens, and hundreds of inches. Simply place paper clips along the track to record the proper height. It's important to keep an eye on your hero's altitude because it may change voluntarily due to maneuvers or involuntarily due to damage or loss of control. If it hits zero, your brainer is in trouble.

Rotary wing aircraft can hover in place and even move sideways or backwards. They don't need to maintain a minimum speed, but if they ever lose power to their rotors they're in big trouble. See page 76 for the details.

VTOL

VTOL aircraft are the next step beyond hovercraft. These aircraft are equipped with powerful, high-efficiency jet turbines which produce enough thrust to both lift the vehicle into the air and propel it forward simultaneously. Unlike some VTOL aircraft of the 20th century like the AV-8 Harrier, these vehicles don't require wings for lift once the aircraft begins its forward movement.

These aircraft were first developed by the military in the early 2020s, but by mid-century a number of models had been developed for civilian use. The use of these "aircars" had become widespread enough by the late 2060s that most major cities had established VTOL traffic lanes. They were primarily a toy of the wealthy, however, due to both their high price and the rate at which they guzzled fuel.

Like rotary wing aircraft, VTOLs can hover and move sideways or backwards. However, since the VTOL's engine is the only thing holding it in the air, it's in a world of hurt if it loses power.

Maneuvering

Unless your hero's attempting a trans-Atlantic flight, he's eventually going to have to do more than fly in a straight line.

Using Maneuvers

As we mentioned earlier, every pilot who's performing a *flyin'* action can attempt a single maneuver each movement phase. Doing this requires a *flyin'* roll. The TN for this is equal to a base TN determined by the flying conditions (see the Flying Conditions Table), plus the TN modifier of the maneuver being attempted. The pilot's roll is modified by the aircraft's Handling modifier and any damage the vehicle has suffered.

Some maneuvers, like accelerating, are considered simple actions and require no roll. A single, simple action can be performed each movement phase in addition to a more complex maneuver.

If your hero is stunned or has stopped piloting for any other reason, your aircraft just moves in a straight line. If the aircraft was climbing or diving, it continues to change altitude at the same rate until it either stalls or hits the ground. It pays to keep a sleeve card handy for emergencies!

Speed

Those of you familiar with the rules in *Road Warriors* might notice that the TN for performing a maneuver isn't modified by the aircraft's speed. This is because aircraft handle differently than ground vehicles, and in general, more speed is better.

Making the Roll

If your hero makes her *flyin'* roll, she's home-free, and the maneuver comes off as planned. If the roll fails, it means a roll on the Flyin' Brick Table. Roll 1d6 (re-rolling aces) on the table and add +1 for each point by which the *flyin'* roll was missed. If the pilot ever goes bust on a roll, roll 2d6 plus the number of points by which the roll was missed.

Sometimes your waster is forced to make *flyin'* rolls between your movements—sometimes you might have

Flying Conditions

Condition	TN
Calm weather	3
Moderate winds	5
Thunderstorm	7
Gale	9
Hurricane	11

to make a whole bunch between movement phases. Go ahead and make any *flyin'* rolls that come up during your movement as soon as they occur. If one or more come up between your moves, hold off on making them until immediately before the next time you move. Then make a single *flyin'* roll (regardless of how many things required them), using the modifier from the hardest required roll.

Pilotless Aircraft

An aircraft without a pilot or with a pilot who is otherwise occupied, moves in a straight line each movement phase. If it's forced to make a *flyin'* roll by an outside action (like a collision or weapons fire), it automatically fails. Roll 2d6 on the Flyin' Brick Table.

If the aircraft has a copilot, this individual can take over control of the aircraft on her next Action Card.

Autopilots

Many aircraft are equipped with an autopilot system. These systems have a limited ability to control the vehicle. For our purposes there are three types of autopilot: basic, advanced, and military. It takes one action to engage or disengage a vehicle's autopilot.

Basic autopilots are the type found in most light civilian aircraft. One of these systems can maintain an aircraft at a constant heading, speed, and altitude. These systems have a *flyin'* Aptitude of 3d6 and always attempt to return the aircraft to its set heading, altitude, and speed.

Advanced autopilots are found in most commercial aircraft. These systems can not only maintain course and speed, but they can also guide the aircraft along a preset course, and even land the aircraft at a properly equipped airport. These systems have *flyin'* at 3d8.

Military autopilots can fly the aircraft almost as well as the pilot. They can do everything the commercial systems can

do, as well as execute preset evasive maneuvers, automatically activate countermeasure systems, and even release ordnance at preset targets. A miliary grade autopilot has a *flyin'* Aptitude of 3d10.

Drag

No, this has nothing to do with wearing women's clothing.

Drag is the frictional force of the air moving past the aircraft's body. Generally speaking the faster an airplane moves, and the more violently it maneuvers, the more drag it experiences. Aircraft with klunky, non-aerodynamic shapes and heavy aircraft also suffer increased drag. If a vehicle's engine can't generate more thrust than drag, the aircraft loses speed.

Each time an aircraft performs a maneuver that causes Drag, roll 1d4 and add the maneuver's Drag rating to the roll. Don't re-roll aces. Also add any increased Drag due to the aircraft's load (this is explained on page 85). This gives a number of Drag points which are multiplied by 5 mph to determine the aircraft's speed loss.

A plane that suffers 5 points of drag, for instance, loses 25 mph of speed. Speed loss due to drag is applied to an aircraft's speed for the following movement phase. However, if the aircraft's speed drops below its stall speed, the effects of the stall are applied before the pilot has a chance to accelerate during the next movement phase.

Because drag increases with speed, the Drag rating of each maneuver is increased by +1 for each full 200 mph of speed the aircraft has. A maneuver with a Drag rating of 2 would have a rating of 4 when performed by an aircraft moving at a speed of 400 mph.

Hotshot Pilots

The effects of drag can be mitigated to some extent by good piloting. For each raise a pilot gets on his *flyin'* roll when performing a maneuver, the total Drag caused by the maneuver is reduced by 1. The total Drag can never be reduced below 1—even a hotshot can't ignore the laws of physics!

The Maneuvers

A pilot can attempt a maneuver at any time during her aircraft's movement (except for acceleration and deceleration, which must be performed before the vehicle moves). As mentioned above, she can make more than one maneuver in a phase if she uses a sleeve card for the extra action. In addition, certain maneuvers (accelerate, dive, etc.) are simple actions which require no *flyin'* rolls and can be combined with a second maneuver at no penalty. However, unless hovering, a vehicle must always move at least 1" between each maneuver.

Each maneuver has a number of common characteristics. *TN Modifier* is the amount by which the base TN for the *flyin'* roll is increased when attempting the maneuver. *Drag* is the amount added to the drag roll when determining the amount of speed the aircraft loses from the maneuver. *Aircraft* lists the types of aircraft which may perform the maneuver.

High-G Maneuvers

The descriptions of some maneuvers mention that they are high-G maneuvers. This means that both the aircraft and its passengers are subjected to extreme G forces which stress the occupants and the vehicle's frame.

Whenever an aircraft performs a high-G maneuver, all occupants of the vehicle must make an Easy (3) *Vigor* roll to avoid temporarily blacking out. The TN of this roll is increased by +1 for every full 50 mph of speed the aircraft is moving at. Any brainer who fails this roll is treated as if stunned and may roll to recover on subsequent actions.

All aircraft performing a high-G maneuver lose 1d4-3 points of Durability. Add +1 to this roll for each full 100 mph of speed. If this damage causes a critical hit, randomly determine whether the damage is applied to the vehicle's fuselage or wings (or rotors, if a helicopter). Military aircraft and civilian aircraft built for aerobatics are reinforced for high-G loads and subtract a fixed amount from this roll. The exact amount is listed in each aircraft's individual description.

Accelerate

TN Modifier: 0
Drag: None
Aircraft: All

Your flygal can give the aircraft more throttle each movement phase if she desires. Accelerating increases the vehicle's speed by up to its Acceleration rating (vehicles in our world always accelerate in 5 mph increments to make bookkeeping easy). Slide the paper clip down the air speed indicator to mark the crate's new speed. This change takes effect before the vehicle moves.

Accelerating is a simple action (speed 0). Hovering helicopters and VTOLs may accelerate to the side or even in reverse, but check the rotate maneuver (page 62) for the restrictions placed on this type of flying.
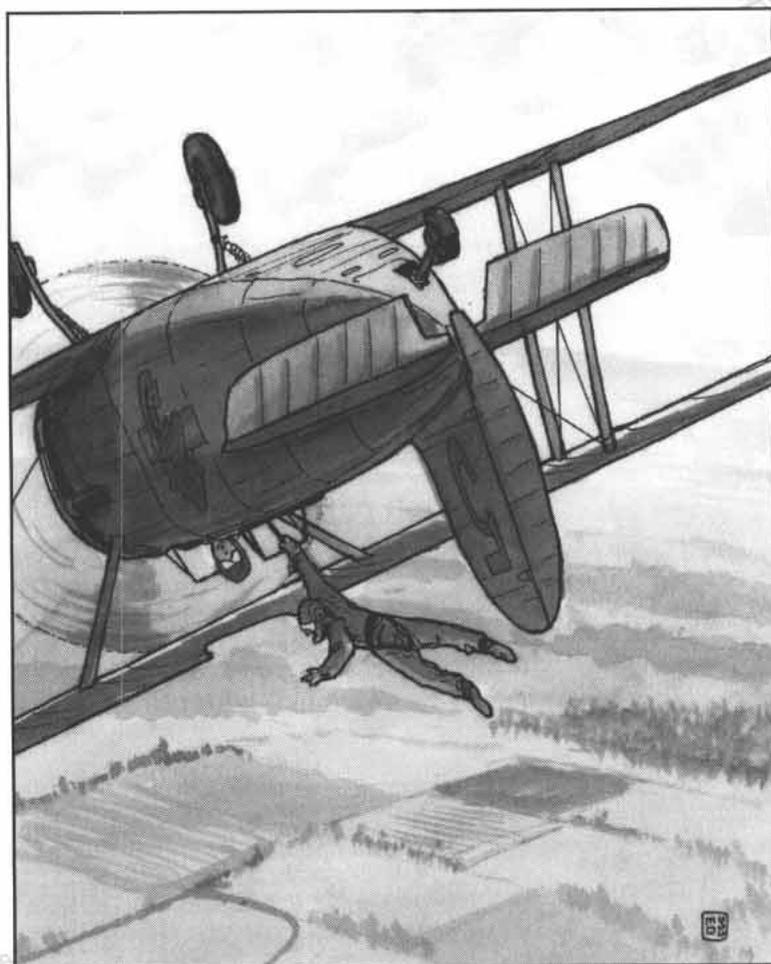
Bank

TN Modifier: +2
Drag: 1
Aircraft: All

This maneuver allows the aircraft to change its direction of movement by up to 45°. At any point in its move, simply rotate the vehicle's counter up to 45° around one of its front corners.

Barrel Roll

TN Modifier: +4
Drag: 2
Aircraft: Fixed wing

This maneuver allows an aircraft to move sideways in a series of corkscrewing loops. For every inch the aircraft moves forward, it may also move up to 1" sideways. The vehicle may only roll in one direction; reversing the direction of the roll is considered a separate maneuver and requires another *flyin'* roll.

Due to the aircraft's corkscrewing motion during a barrel roll, all weapon fire at or from the vehicle suffers a –4 modifier until the following movement phase.

Climb

TN Modifier: 0
Drag: 1
Aircraft: All

This maneuver is a shallow climb which allows the aircraft to gain altitude without losing large amounts of speed. For every 2" of forward movement sacrificed, the aircraft gains 1" of altitude. An aircraft may not sacrifice more than half of its forward movement in a climb.

An aircraft moving at 80 mph for instance, has 8" of movement. If it sacrifices 4" of movement, moving only 4" inches forward, it gains 2" of altitude and suffers 1d4+1 drag.

A climb is considered a simple action and may be combined with other maneuvers.

Decelerate

TN Modifier: 0
Drag: Special
Aircraft: All

This maneuver is used to slow an aircraft down without changing altitude (if your waster doesn't mind increasing altitude, you might want to check out the climb maneuvers).

The decelerate maneuver can be used in two ways. The first way is for the pilot to simply throttle back. This causes 1d4 drag, requires no roll, and is considered a simple maneuver. The pilot can use as much or as little of this drag as required.

If your brainer needs to slow down more quickly than this, he needs to make a *flyin'* roll. This represents doing such things as lowering flaps and landing gear, deploying air brakes, etc. A successful roll creates 1d4 drag; each raise adds +2 to the drag roll. As long as the roll succeeds, the pilot can use as much or as little of this drag as needed.

Going bust on this roll creates 1d4+4 drag. All of this drag is applied to the aircraft's speed, even if it drops the aircraft below its stall speed.

With a successful roll, VTOL aircraft may add their Acceleration rating to the drag created through this maneuver. This is considered a high-G maneuver.

Dive

TN Modifier: 0
Drag: None
Aircraft: All

This maneuver is a shallow dive which allows the aircraft to pick up some speed without sacrificing a lot of altitude. For each 2" of forward movement sacrificed, the aircraft loses 1" of altitude and picks up 5 mph in speed. The vehicle may not sacrifice more than half of its movement in a shallow dive. This maneuver is considered a simple action and may be combined with other maneuvers.

Aircraft may exceed their top speed by 50% while in a dive. Going faster than this causes the aircraft to lose 1d4–3 Durability plus 1 for each 5 mph by which the top speed is exceeded. Any criticals caused by this damage are applied to the fuselage or wings (or

rotors if a helicopter), determined at random. Once the aircraft returns to level flight, it slows by 5 mph per movement phase until its speed has dropped to its maximum speed.

Emergency Turn

TN Modifier: +6
Drag: 3
Aircraft: All

This is a hard, banking turn. It must be attempted before the aircraft moves. If the pilot succeeds at his *flyin'* roll to perform this maneuver, immediately rotate the aircraft 45° around the front corner of its counter. Move the aircraft half of its movement for the phase, and then rotate it up to another 45° in the direction of the turn.

The emergency turn is a high-G maneuver.

Jink

TN Modifier: +2
Drag: 1
Aircraft: All

Jinking is a series of small, erratic course changes intended to throw off an enemy's aim. The pilot must announce his intention to jink before the aircraft moves.

The aircraft is moved in a straight line, but it loses 1d4" of movement (not speed, this remains unchanged unless reduced by drag) to jinking. Each success and raise on the *flyin'* roll increases the TN of all attacks against the aircraft by +2 until the next movement phase.

Lift Adjustment

TN Modifier: +2
Drag: None
Aircraft: Lighter-than-air

This maneuver allows lighter-than-air craft to change altitude without climbing or diving. This is done by adjusting the amount of lift generated by the vehicle's gas bag. To go up, the air is heated or more helium is released into the bag. To go down, gas is released from the bag.

All LTA vehicles have a Lift rating. This is the number of inches of altitude the vehicle can gain or lose in a

movement phase using this maneuver. Losing altitude in this way does not increase the vehicle's speed.

Power Climb

TN Modifier: +2
Drag: 1
Aircraft: Rotary-wing, VTOL

This maneuver allows the aircraft to use excess lift available from its rotors or lift jets to gain altitude. This can only be done if the vehicle is moving at half of its maximum speed or less.

Each 5 mph of the vehicle's Acceleration applied to the power climb gains the craft an inch of altitude. This maneuver can be combined with a regular climb, but not a vertical climb. It can also be combined with an accelerate maneuver, but the combined

Rotate

TN Modifier: +4
Drag: 1
Aircraft: Rotary wing, VTOL

Rotary wing and VTOL aircraft which are moving at a quarter of their maximum speed or less can perform this maneuver. Rotating allows the pilot to turn the body of the vehicle to face a different direction than the one in which it is traveling.

While the body of the vehicle faces away from the direction of travel, all non-simple maneuvers have their Drag increased by 1 and their TNs increased by +2 (+4 if the vehicle is facing 180° away from the direction of movement). Turning the body of the aircraft back to face the front requires a separate rotate maneuver.

The aircraft may not accelerate to a speed faster than a quarter of its maximum speed while rotated.

Sideslip

TN Modifier: +2
Drag: 1
Aircraft: All

A sideslip allows the aircraft to drift to one side while moving forward. For each inch the aircraft moves forward, it may slide up to 1/2" to one side. Reversing the direction of the sideslip requires a separate maneuver.

If a pilot has a sleeve card, he can use the sideslip as a vamoose. Sacrifice the sleeve card and perform the maneuver. If it's successful, immediately slide the aircraft 1/2" to one side and the TN for the attack being dodged is increased by +2. The dodging aircraft can continue the sideslip on its next movement phase without needing to roll or incurring any additional drag.

Slide

TN Modifier: +4
Drag: 1
Aircraft: Rotary wing, VTOL

In a slide, the aircraft uses its rotors or steering jets to push it to one side. For each inch the vehicle moves forward, it may slide 1" to one side. Reversing the direction of the slide requires a separate maneuver.

amount of Acceleration used in the two maneuvers may not exceed the vehicle's maximum Acceleration.

Roll

TN Modifier: +2
Drag: 1
Aircraft: Fixed wing

This maneuver spins the aircraft around its center line.

A roll has two main uses. If performed immediately after a vertical climb or vertical dive, a roll allows the aircraft to turn to face in any direction. It can also be used to get rid of unwanted passengers who aren't strapped in (Hard (9) *Strength* roll to hold on) or to at least bounce them around the cabin for 3d6 massive damage.

This maneuver can be used as a vamoose in the same way as the sideslip. Because this maneuver is a bit more radical, it increases the TN of the attack by +4. The slide can be continued on the aircraft's next movement phase.

Vertical Climb

TN Modifier: +6
Drag: 4
Aircraft: Fixed-wing, rotary wing, VTOL

This maneuver allows the aircraft to trade speed for altitude (it's also a good way to scare your passengers). The aircraft must sacrifice an amount of forward movement equal to half of its movement or greater. For each inch of forward movement sacrificed, the vehicle gains 1" of altitude.

Entering a vertical climb from level flight or a dive is considered a high-G maneuver. An aircraft may not enter a vertical climb from a vertical dive. If the vehicle performed a climb on the previous movement phase it can enter the vertical climb with no penalty.

If the aircraft performs a roll (see page 62) on the movement phase following a vertical climb, it can turn to face any direction.

Vertical Dive

TN Modifier: +6
Drag: None
Aircraft: Fixed wing, rotary wing, VTOL

This is the opposite of the vertical climb; the aircraft trades altitude for speed (it's also an even better way to make your passengers soil themselves). The aircraft must sacrifice an amount of forward movement equal to half of its movement for the phase or greater. For each inch of forward movement sacrificed, the vehicle loses 1" of altitude and gains 10 mph in speed. This speed increase is applied on the following movement phase.

Unlike other maneuvers, the *flyin'* roll for a vertical dive isn't made until the maneuver ends. The pilot can continue a vertical dive from phase to phase without rolling. If the roll succeeds, the pilot can choose to enter a dive on his next movement phase or pull up to level flight. Going from a vertical dive to level flight is a high-G maneuver.

Failing the roll means the aircraft loses an additional 1d6" of altitude before coming out of the dive. No speed is gained for this extra altitude loss. Going bust means the aircraft continues to dive at its maximum rate for another movement phase. The pilot must make another roll at the end of that phase to attempt to end the dive.

Aircraft may exceed their top speed by 50% while in a vertical dive. Going faster than this causes the aircraft to lose 1d4-3 Durability plus 1 for each 5 mph by which the top speed is exceeded. Any criticals caused by this damage are applied to the fuselage or wings (or rotors if a helicopter), determined at random. Once the aircraft returns to level flight it slows by 5 mph per movement phase until its speed has dropped back down to its maximum speed.

Entering a vertical dive from level flight or a climb is considered a high-G maneuver. An aircraft may not enter a vertical dive from a vertical climb. If the vehicle performed a dive on the previous movement phase it can enter the vertical dive with no penalty.

If the aircraft performs a roll (see page 62) on the phase following a vertical dive, it can turn to face any direction.

Classic Maneuvers

Those of you familiar with aerial combat may be wondering where all the classic airborne maneuvers like Immelmans, loops, and the split-S are. All of these maneuvers take much longer than a one-second movement phase to complete, so rather than have complicated rules for maneuvers which take multiple phases, these tricks were broken up into their component parts.

An Immelman for instance, would be a climb followed by a vertical climb followed by a roll at the top to reverse the aircraft's direction. A split-S would be the same thing except using a dive and a vertical dive.

One of two things can happen when an aircraft stalls. It can nose over into a dive, or it can go into a spin. The pilot must make an immediate Hard (9) *flyin'* roll. If he succeeds, the airplane goes into a dive. Failing means that the craft goes into a spin.

Dives

If a stalled aircraft goes into a dive, your flyboy should count himself lucky (unless, of course, he's only a few feet off the ground). Treat this exactly like a vertical dive maneuver. On the first phase after the aircraft stalls it must spend its entire movement diving. If the stall actually dropped the plane's speed to zero, or it just came out of a spin (see below), it accelerates 20 mph on this first phase. The aircraft continues to dive until its speed exceeds its stall speed. Once this happens, the pilot may attempt to pull up or he may continue the dive and gain more speed.

Spins

If you've ever seen the movie *Top Gun*, you know that spins are bad news. What happens in a spin is that the aircraft tumbles out of control, losing altitude without picking up any forward movement to restore lift. Because the airflow over the wings has been disrupted, the control surfaces don't function correctly and it can be difficult for the pilot to correct the situation.

Once an aircraft goes into a spin, its speed drops to zero; and it loses 1d6" of altitude each movement phase. Its facing also changes to a random clock facing each phase (roll 1d12 to determine). If the aircraft hits the ground it takes damage equal to a number of d6 equal to half the height fallen. A plane falling from an altitude of 20" would take 10d6 damage, for instance.

At the end of each movement phase, the pilot may attempt to end the spin. This requires a *flyin'* roll against a TN of 15. The good news is that each phase after the first, the TN drops by 2. If the roll succeeds, the spin ends and the plane goes into a vertical dive. Now all your waster needs to do is get the airspeed back above stall speed. See **Dives** above.

Stall Speed

Pilots of fixed wing aircraft always need to keep one eye fixed on their air speed indicators. That's because unlike other flying vehicles, fixed wing aircraft can stall. This has nothing to do with the aircraft's engine cutting out. When an airplane stalls, it means that the airflow over the vehicle's wings has been disrupted and they are no longer producing lift. This can be caused by radical maneuvers or by the plane's airspeed dropping too low.

All fixed wing planes have a listed stall speed. As long as the craft's speed is equal to or greater than this speed, everything is hunky-dory. If it drops below this speed, usually due to drag, the aircraft stalls.

Oh. One added complication. Being inside a spinning aircraft is a high-G maneuver. Each phase that the aircraft is in a spin, everyone inside must make an Onerous (7) *Vigor* roll to keep from blacking out.

Take Off

The stall speed concept applies to getting your brainer's crate off the ground. An aircraft on the ground must accelerate in a straight line until its speed reaches its stall speed. Once that happens, the pilot can use a climb maneuver to get off the ground. (It's usually a good idea to let the speed get slightly above stall in case drag from the climb slows the plane down.)

Rotary wing, light-than-air, and VTOL aircraft can take off vertically, so they don't have to worry about building up speed.

Landing

Landing is essentially the same process in reverse. The aircraft lines up with the runway, slows to near stall speed (within 10 mph), and then descends in a shallow dive. Once altitude drops to zero, the pilot must make a Fair (5) *flyin'* roll to "flare" the plane out. This deliberately stalls the wings and settles the plane gently onto the runway. Failure causes 1d4-2 damage to the landing gear.

Sometimes it's necessary to land hot. For game purposes this means landing when your speed is more than 10 mph above stall speed. This requires an Onerous (7) *flyin'* roll. The TN is increased by +2 for every 10 mph "hot" the aircraft is. If the roll succeeds, the plane gets down in one piece. Failure means that the plane bounces back into the air. It immediately gains an altitude of 1" and suffers 1d4 drag. If the aircraft doesn't stall, the pilot can try to set it down again on the next phase.

While on the ground, aircraft are governed by the movement rules for ground vehicles found in *Road Warriors*. An aircraft receives no bonus for its Handling while grounded. Taxiing aircraft can perform the following ground vehicle maneuvers: accelerate, brake, donut, drift, and turn.

Some aircraft are equipped with thrust reversers or parachutes to aid in braking once on the ground. These are listed in the individual aircraft descriptions and state how much additional braking power they give. The plane may brake by this amount plus 10 mph without having to make a roll to keep the plane under control.

Flyin' Brick

Roll	Effect
1-2	**Drag:** The maneuver is executed, but its drag rating is increased by 1.
3-4	**Bumpy Ride:** The maneuver works, but don't expect your passengers to fly with you again. The unexpected jolts impose a -2 to all Aptitude rolls made before the next movement phase.
5-6	**Sideslip:** The aircraft sideslips for the vehicle's full movement rather than performing the desired maneuver. If the aircraft was turning, it slips in the direction opposite of the desired turn.
7-8	**Altitude Gain:** The intended maneuver fails, and the aircraft accidentally gains an extra 1d6" of altitude and suffers 2 drag.
9-10	**Altitude Loss:** The intended maneuver fails and the aircraft accidentally loses 1d6" of altitude. It gains no extra speed from this loss.
11-12	**Tumble:** Your brainer temporarily loses control. The aircraft moves randomly. For each inch of movement roll 1d6. On a 1 it turns 45° to the left, on a 2 through 5 it goes straight, and on a 6 it turns 45° to the right. Its altitude also changes. Roll a die. On an even result it gains 1d4" of altitude. On an odd result it loses 1d4". The tumble causes the aircraft to suffer 3 drag.
13-14	**Stall:** The aircraft stalls. Its speed immediately drops to 10 mph below its stall speed. The pilot must make the usual roll to determine whether the vehicle dives or spins.
15+	**Stall & Spin:** As above, but the aircraft automatically goes into a spin. Your brainer really screwed the pooch on this one.

Furballs

Now that your brainer knows how to write his true love's name in the sky in big letters, it's time to talk about how to put those flying skills to good use. Namely, sending your enemies back to earth as a flaming, screaming wreck.

Aerial combat works much like regular combat with a few twists and special modifiers. Unless the rules state otherwise, all normal modifiers apply.

A character may fire either a personal or vehicle weapon on each of his actions. This requires an Action Card—pilots don't get to fire vehicle weapons as piloting maneuvers. A hero can fire multiple weapons which have linked fire controls as a single action. All linked weapons must be fired at a single target, but make separate attack rolls for each one.

Range

If you are using the counters and movement rules provided in this book, simply measure the distance between the shooter and the target. Each inch of distance translates to 5 yards of range. Use the weapon's Range Increment to determine the base TN to hit, just as you would in normal combat.

Flying targets add another variable into the mix: altitude. When figuring the range to a target that is at a different altitude, add half the difference in height to the horizontal range. A target that was 10" away and 10" higher than the shooter would be considered to be at a range of 15" (10" + 10"/2). This method isn't entirely accurate, but it beats having to do a bunch of square roots in the middle of a combat.

Speed

Speed affects ranged attacks in a number of ways. For starters, all fire from moving vehicles suffers the -2 "firer mounted" penalty. If the vehicle comes to a halt, of course, you can ignore this penalty.

Shooters suffer a further -1 penalty to their *shootin'* totals for each 10 mph of the target's speed. This speed is figured relative to the shooter. If the shooter's vehicle is moving in the same general direction as the target, subtract the slower speed from the faster to find the relative speed. If the shooter and target are directly in line with each other, halve this number (since it's much easier to hit a target that is moving in a straight line toward or away from you). If the target is moving across the shooter's path, simply use the target's actual speed.

Size

Every vehicle has a size modifier. Add this to the *shootin'* total of anyone firing at it.

Called Shots

If your hero wants to damage a particular part of the target, he can take a called shot. The modifiers to hit common aircraft locations are listed on the Airborne Shootin' Table. When taking a called shot at an aircraft, the vehicle's Size modifier does apply to the *shootin'* total—a 747's tires and engines are a lot bigger than those of a Piper Cub. This is different from *Road Warriors*.

Fixed Weapons

The most common aircraft weapons are forward facing in fixed mounts. These weapons are aimed by pointing the aircraft at the target. This requires not only some piloting skill, but the knowledge of when to hit the trigger. When firing these weapons, the driver uses his appropriate *shootin'* Aptitude, but it's based on his *Nimbleness* instead of his *Deftness*.

Remote Weapons

Most vehicle weapons are fired either by the driver or by a gunner who is physically manning the weapon. They're aimed through their sights or the front

of the aircraft. Some equipment, though, allows a hero to control a weapon remotely, but without giving much of a sight picture. Remote-controlled weapons, and any rear-facing weapons fired by the pilot, fall into this category and suffer a -4 penalty to all *shootin'* rolls.

Attitude

Sorry, we're not talking about how cool your waster is. This is about which way your brainer's aircraft is pointing when it comes time to pull the trigger. A plane in a vertical dive is going to have a hard time shooting an aircraft above it. Depending on the firing aircraft's last maneuver, it may have restrictions on which targets it can shoot at. Check out the Attitude Table for details.

Note that these restrictions apply to fixed-mount, forward-firing weapons— the most common type of aircraft weapon. Rear-firing weapons would reverse the restrictions. In other words, a rear-firing weapon treats a vertical dive as a vertical climb when figuring restrictions. Marshals should use common sense when figuring firing restrictions for turret-mounted weapons and other weapons with unusual firing arcs.

Bombs Away!

Flying machines hadn't been around very long when someone realized that you could drop things on people from up above. Of course, things got out of hand, as they tend to do, and the dropped items quickly escalated from lugeys and eggs to rocks to 2000 lb., delayed fuse, laser-guided bombs.

There are many variables that go into computing a bomb's release point and trying to model this realistically would require a lot of math (not to mention a much larger playing area), so we've opted for a simplified system.

To bomb a target, the attacking aircraft must fly directly over it. The attack is made as the aircraft passes over the target, so the pilot or bombardier must have a card held to drop the bombs. The TN for the attack depends on the types of bomb being dropped and the aircraft's maneuvering.

Attitude

Attitude	Restriction
Level flight	Horizontal range to the target must be greater than the difference in altitude.
Climb	Target must be at an altitude equal to or higher than the firing aircraft and the horizontal range to the target must be greater than the difference in altitude.
Dive	Target must be at an altitude equal to or lower than the firing aircraft and the horizontal range to the target must be greater than the difference in altitude.
Vertical climb	Target must be at a higher altitude than the firing aircraft and the difference in altitude must be greater than the horizontal range to the target. The aircraft may fire on aircraft which are "behind" it.
Vertical dive	Target must be at a lower altitude than the firing aircraft and the difference in altitude must be greater than the horizontal range to the target. The aircraft may fire on aircraft which are "behind" it.
Spin	No weapon fire possible from the spinning aircraft. All fire at the aircraft suffers a -4 penalty.

Airborne Shootin'

Situation	Modifier
Firing remote weapon	-4
Called shots:	
Engine	-2
Tire (from side)	-4
Tire (from front or rear)	-6
Passenger	Special*
Window	-4
Weapon	-4
Fuel Tank	-4
Target Speed	-1/10 mph
Size	Vehicle Size

*Roll passenger hit location normally

Bombing

Situation	TN Modifier
Each 70" of altitude (approx. 1000')	+1
Each full 100 mph of speed	+1
Aircraft turned on previous phase	+2
Aircraft turned on current phase	+4
Each phase flying straight at target	-1 (Max -6)
Target size	-Size mod.
Diving at target	-2
In vertical dive at target	-4

The base TN for a bombing attack is 11, but there are quite a few factors that can adjust the TN. These are listed on the Bombing Table above. The speed and altitude modifiers are pretty self-explanatory, but let's take a look at a few of the others.

Turns

Turning just prior to dropping bombs makes it much more difficult to line up the attack. In addition, if the plane is still banked when it releases its load, the G forces cause the bombs to drop sideways, away from the direction of the turn. If the aircraft turned on the phase just before the one in which the attack is made, the TN goes up by +2. If the aircraft turns on the same phase as the attack, the TN goes up by +4. The aircraft can turn after passing over the target with no penalty.

Flying Straight

Each phase that the aircraft spends traveling in a straight line toward the target lowers the TN by -1. This means that vehicle may not perform any maneuvers other than accelerate, decelerate, dive, and vertical dive. Even though the aircraft moves straight, it cannot perform a jink maneuver without throwing off the pilot's aim and losing this bonus.

The maximum amount this can lower the TN is by -6.

Size

The TN of the attack is reduced by the Size modifier of the target. If the pilot is simply aiming at a point on the ground, this is considered a Size modifier of 0.

Diving

Diving at a target greatly increases bombing accuracy. If the aircraft is in a dive or vertical dive on the phase it passes over the target, it receives the appropriate modifier.

The Attack

Once you've figured out the final TN for the bombing run, your hero needs to make a *flyin'* roll. If he succeeds, the bomb lands right on target. If not, it's necessary to find out where it landed.

Roll 1d12 to determine a random clock facing out from the point of impact. The bomb deviates in this direction a distance equal to the aircraft's speed divided by 100 (round up) times the number of points by which the attack roll missed.

Any number of bombs can be released in a single attack. If the attack succeeds they all hit on target; if it fails they all deviate to the same spot.

Ripple Release

Most military aircraft can perform a ripple release of their bombs. What this means is that once the pilot hits the bomb release, bombs drop from the plane at a set interval.

When performing a ripple release, the pilot must specify the bomb release interval; this is usually anywhere from a quarter second to one or two seconds. Conduct the attack as usual and determine where the first bomb lands. The remaining bombs land in a straight line pointing in the direction of the aircraft's movement when the attack was made. The distance between each bomb is equal to the selected interval in seconds times the aircraft's speed when the bombs were dropped. The bombs from an airplane moving at 160 mph (16" of movement) with a quarter second release interval would land 4" apart (16" x .25 seconds).

Guided Bombs

Guided bombs use the same procedure as unguided. The only difference is that the target must be illuminated by a targeting laser at the time the attack roll is made. It doesn't matter who fires the laser—it could be the bombing aircraft, the bomber's escort, or someone on the ground—as long as its tuned to a frequency the bomb can "see."

As long as the target is being "painted" with a laser, the bombs ignore all modifiers for the aircraft's speed and altitude and any modifiers for the aircraft turning. Diving at the target still helps to improve accuracy. If the bombs are on target, they hit at the precise point targeted by the laser. If they miss, they deviate only half of the normal distance.

If a smart bomb has no laser spot to track, resolve its attack as if it was a regular, unguided, "dumb" bomb.

Painting a target for a smart bomb attack simply requires the person doing the designating to hit the target with a successful *shootin': laser* roll, and keep the laser on the target until the bombs impact. If the target is stationary, this is automatic. If the target is moving, the designator must roll to hit on his first action each round.

Missiles

Another weapon that is a big part of modern aerial combat is the guided missile. Although supplies of these bad puppies are running low since the end of the Last War, it's still possible to run into one. The Combine and Junkyard still turn out small numbers of them, as do individual junkers with the *rocket man* power, and many intrepid pilots have modified their crates to hold a brace or two of these deadly projectiles. A few unlucky souls have also found functional automated SAM (surface-to-air missile) emplacements along the Mason-Dixon wall the hard way.

There are three basic steps to determining if a guided missile your brainer launches actually hits its target: target acquisition, launch, and countermeasures. Let's take a look at what happens in each of these steps.

Target Acquisition

All missiles depend on a sensor of some sort to guide them to their targets, so the first step in launching one is making sure that the sensor is locked onto the target. For laser-guided weapons, this means hitting the target with a targeting laser. As with guided bombs, this simply requires a successful *shootin': laser* roll.

Most other missiles rely on either radar or a passive infrared sensor to home in on their targets. These missiles must lock on before they can be fired. This requires an action from the pilot or weapons operator. Roll the sensor rating of the weapon's sensor versus the rating of any jamming systems the target possesses. Radar-guided missiles can use the radar rating of the launching
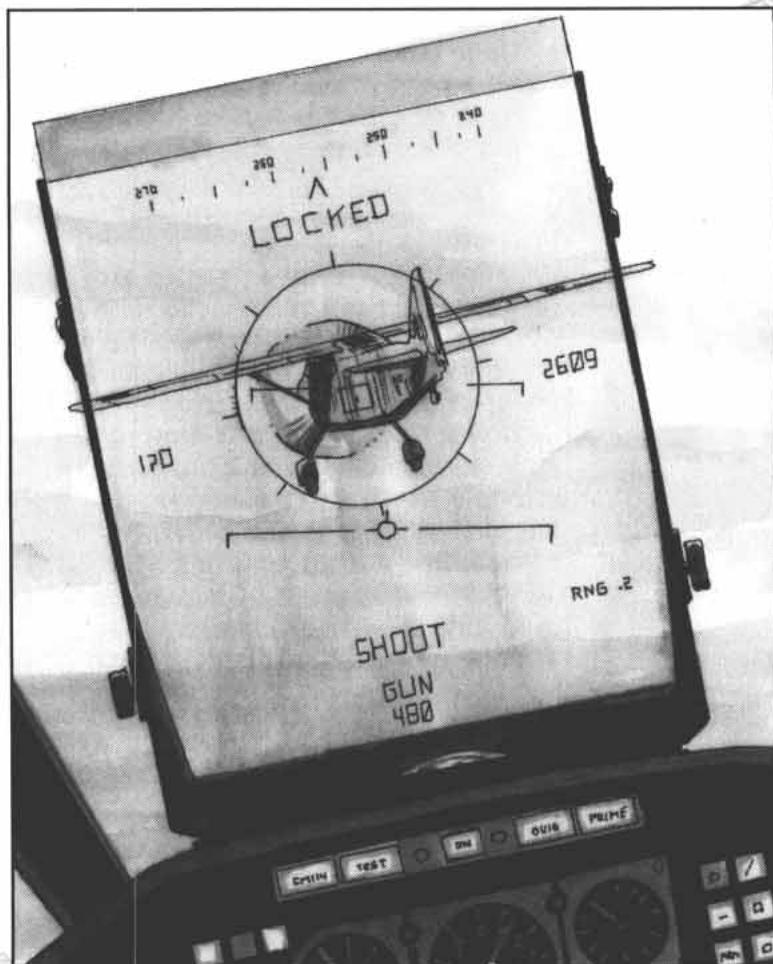
vehicle to lock on if this is higher than the missile's rating. If the person operating the missile has *professional: sensor operation*, he can make a Fair (5) roll to aid lock on. Each success and raise on this roll adds +1 to the sensor roll. The target's size modifier is also added to the sensor roll. At the other end, if someone is actively operating the jamming system, he can also make a *professional: sensor operation* roll to add to the jammer's total.

If the target is not jamming, the sensor simply has to succeed at a Fair (5) roll.

Once lock-on is achieved, the weapon is ready to fire. The pilot or weapons operator can launch it on her next action. If the weapon is not launched immediately, the lock-on must be maintained each round. Roll on the first Action Card of the character controlling the weapon.

A target vehicle can only tell that it has been locked on to if it has a system capable of detecting the sensor being used by the launching vehicle. In most cases this means a radar detector or laser sensor.

There is no way to tell if a weapon using a passive sensor, like a heat-seeking missile, has locked on until it actually launches.

Launch

Launching a missile requires an action. Once fired, the missile travels a distance equal to its listed Move plus the launching vehicle's speed each phase. A missile with a Move of 70, launched from an aircraft moving at 12" a phase, would move at 82" a phase, for example. Don't worry about plotting the missiles exact path, simply move it in a straight line toward its target. The missile must spend 1" of movement for each inch of altitude change.

If the target aircraft is aware that it has been locked on to, assume that the crew has its eyes peeled for the missile and automatically detect it when

launched. If not, all passengers in the target vehicle who are in a position to see the missile (this is up to the Marshal, but should be based on the type of aircraft the heroes are flying and the direction from which the missile is approaching) should make a Hard (9) *Cognition* roll immediately after launch, and at the beginning of each round thereafter, to spot it.

If the missile isn't spotted before it reaches its prey, the target aircraft cannot take any evasive actions against it, jam it, or activate any countermeasures.

Countermeasures

If the target aircraft is aware that a missile is bearing down on it, it can attempt to spoof it or at least get the Hell out of its way. On each of their Action Cards following the missile's launch, the pilot and any passengers with access to the appropriate controls may attempt to jam the missile or activate countermeasures systems like flare or chaff launchers.

Jamming the incoming missile is another contest of the jamming system's rating versus the missile's sensor rating, plus any applicable modifiers due to the system operator's *professional: sensor operation* roll. If the jammer wins, the missile loses its lock and goes off course.

On the phase in which the missile reaches its target, the pilot has one last chance to avoid disaster. If the pilot has an Action Card remaining, he can spend it as a vamoose to perform an emergency turn maneuver. Roll a contest of *flyin'* between the pilot and the missile.

If the pilot wins, the missile misses the target aircraft by 1" for every point by which his total exceeded the missile's. This may still leave the target inside the area of effect of the missile's warhead. Provided it survives the blast, the next time the target aircraft moves, it must perform an emergency turn using the *flyin'* total generated for the vamoose.

If the pilot loses, the missile stays on target and explodes with the target within its first burst radius. Have a nice day!

Damaging Aircraft

In case you missed it in *Road Warriors* or *The Junkman Cometh*, here's the rules for damaging vehicles and other mechanical objects one last time.

Durability

As we mention in *Hell on Earth*, every vehicle has a Durability rating. This is a measure of how much damage the craft can withstand before it conks out.

Durability Steps

A vehicle's Durability is further broken down into five steps (we called them "damage increments" in *Hell on Earth*, but "Durability Steps" is what we really meant). Each time an aircraft accumulates damage equal to a Durability Step, all *flyin'* and *shootin'* rolls made for the craft suffer a cumulative -1 penalty.

Once a vehicle accumulates damage equal to its Durability, it's considered knocked out. It has become unflyable and ceases to operate. It automatically performs a basic decelerate maneuver each movement phase, until it stalls or the pilot manages to get the thing back on the ground. The only way for the aircraft to pick up speed is to dive.

Rotary wing and VTOL aircraft in this condition are in serious trouble. VTOL aircraft simply drop from the sky. Rotary wing aircraft can attempt to perform an autorotation landing. See page 76 for details.

A vehicle in this condition is not necessarily destroyed. It may still be possible to repair it.

Catastrophic Damage

If a vehicle ever takes damage equal to twice its Durability, it has been destroyed. There's not enough left to put back together, although a merciful Marshal might allow your brainer to make a *scroungin'* roll to pick out some spare parts.

Weapon Classes

Ranged weapons are divided up into four classes based on their ability to perforate, twist, and otherwise mangle innocent pieces of machinery, The standard damage ratings for weapons are against living flesh; against unfeeling steel, most do significantly less harm.

Small Arms

Most weapons in *Hell on Earth* fall into this class. It includes most handheld personal weapons and light machine-guns. All firearms smaller than .50 caliber—and other ranged weapons with limited damage potential, like crossbows, slingshots, etc.—are small arms.

Small arms damage is divided by 10 (round down) before subtracting it from a vehicle's Durability. It is possible for a weapon to do *no* damage.

Light Weapons

This class includes most heavy machine-guns and light antiaircraft weapons—all weapons .50 caliber or larger but less than 25mm. Some oddball weapons like ballistae also belong in this class, as does damage from spells not designed specifically for damaging vehicles.

Divide light weapons damage by 5 (round down) before subtracting it from a vehicle's Durability.

Heavy Weapons

This class includes heavy weapons intended to deal with light armored vehicles and fortifications. Weapons 25mm or larger, but less than 75mm fall in this category. Certain large, primitive weapons like catapults are also classified as heavy weapons.

Heavy weapons damage is divided by 2 (round down) before being subtracted from Durability.

Anti-Vehicle Weapons

This class includes all weapons 75mm and larger, and all antitank weapons. These bad puppies do full damage against vehicular targets.

Explosives

Explosives (including burst spells such as *nuke*) can do either light or anti-vehicular damage. Any explosive with a Burst Radius of 10 or more that goes off within its first Burst Radius of the target, or any AP explosive which impacts the target, is treated as anti-vehicle damage. Any explosive with a Burst Radius of less than 10, or which is more than one radius from a vehicle, does light damage.

Applying Damage

Once your waster puts steel on target, it's time to see how much havoc is wrought.

Roll Hit Location

Unless the attack was a called shot, roll 1d20 on the hit location table corresponding to the type of vehicle hit to see where it impacts. As usual, each raise on the *shootin'* roll can modify the hit location by ±1 point.

The hit location tables are set up with the front of the aircraft at the top of the table, and the rear of the vehicle at the bottom. For this reason, add +2 to the hit location roll when firing from the rear and subtract -2 when firing from the front.

Critical Hits

Each time a vehicle accumulates damage equal to a Durability Step (or in the case of weapons, you fail a critical hit check), the vehicle suffers a critical hit. Roll 2d6 on the critical hit chart for the component which took the damage that caused the critical. There are no passenger critical hits.

Location Effects

A number of the hit locations have special effects when they take damage.

Engine

Hits to this location rattle around in the engine compartment. There's normally a lot of metal in such areas, so increase the aircraft's Armor Value in this area by +1. If the aircraft has multiple engines, determine which one suffered the hit randomly.

Fuel Tank

The crate has been hit in the go-juice. The vehicle's Armor applies normally against a fuel tank hit.

Fuselage

Damage to this area has no special effect.

Landing Gear

Retractable landing gear is protected by the aircraft's Armor value while stowed.

Passengers

The shot has hit the passenger compartment. Roll randomly among the passengers to see who was hit and then roll hit location for the unfortunate victim. If the indicated area is covered by the vehicle, apply the vehicle's Armor rating to the damage. If the hit location is exposed (the upper torso, head, and arms, for example, in an open-cockpit biplane) the brainer takes full damage.

Rotors

Damage from projectile weapons has a good chance of passing right through the whirling rotors. Roll 1d6 against the number of rotor blades the aircraft possesses. If the roll is greater than the number of blades, the shells pass through the blades without doing any damage. Otherwise they hit, doing normal damage. Explosive weapons cause damage normally to this location.

Tail Rotor

As with the main rotors, projectile weapons may pass between the rotating blades. Use the same procedure as outlined above. Unless otherwise noted, assume the tail rotor has two blades.

Weapon

Hits to this location strike a weapon mounted on the side of the vehicle facing the shooter. If there is more than one, determine which is hit randomly. If there are no weapons on the targeted side, apply the damage to the body instead. Damage to weapons doesn't subtract from the vehicle's Durability.

Externally-mounted weapons get no protection from the vehicle's armor, but they have an innate Armor value of 1.

Every time a weapon is damaged, check for a critical hit. Roll 1d6 (rerolling aces) against the amount of damage done to the weapon. If the roll exceeds the damage, the weapon is fine. Otherwise it suffers a critical hit.

Fixed Wing, Single Engine

Roll	Location
1-2	Engine
3-4	Passengers
5-9	Wings
10	Landing Gear
11-12	Fuel Tank
13-14	Weapons
15-18	Fuselage
19-20	Tail

Fixed Wing, Multi-Engine

Roll	Location
1-2	Passengers
3-6	Wings
7-9	Engines
10	Landing Gear
11-12	Fuel Tank
13-14	Weapons
15-18	Fuselage
19-20	Tail

VTOL

Roll	Location
1-2	Passengers
3-4	Weapons
5-7	Engine
8-9	Landing Gear
10-11	Fuel Tank
12-17	Fuselage
18-20	Steering Jets

Rotary Wing

Roll	Location
1-2	Passengers
3-4	Engine
5-9	Rotors
10	Landing Gear
11-12	Fuel Tank
13-17	Fuselage
18-20	Tail Rotor

Roll	Location
1-3	Fuselage
4-5	Passengers
6-7	Engine
8-12	Gas bag
13	Landing Gear
14-15	Fuel Tank
16-17	Weapons
18-20	Fuselage

Mandatory Maneuvers

Some critical results call for the vehicle to automatically perform a certain maneuver each movement phase. These mandatory maneuvers always succeed and inflict the maneuver's normal Drag rating on the aircraft.

These maneuvers do not count against the pilot's one maneuver per phase. However, the pilot can use his maneuver to make a *flyin'* roll for the mandatory maneuver and attempt to reduce the Drag.

Collisions

With all the potentially dangerous objects whizzing around the sky, it's very possible your waster's crate may smack into something it shouldn't have. This can be bad for both the aircraft and its occupants.

Look Out!

Whenever an aircraft's counter overlaps that of another aircraft at the same altitude, there's a potential for a collision. The pilots involved may make immediate *flyin'* rolls to avoid this. The TN for this roll is Fair (5) plus +2 for every full 100 mph of relative speed. As long as one of the pilot's involved makes the roll, the collision is avoided.

If one of the pilots involved desires the collision, roll a contest of *flyin'*. If the kamikaze wins, the collision takes place.

In the case of colliding with a stationary object like a mountain or building at the same altitude, the pilot doesn't get this roll. It's up to the player controlling the aircraft to maneuver around such things.

The Laws of Space and Time

A lot of strange things can happen in *Hell on Earth*, but the average vehicle can't alter the laws of physics. In game terms, that means that whenever something like that happens, we close our eyes and ignore it.

Specifically, it's impossible for a slower vehicle to hit a faster vehicle from behind. This situation sometimes occurs when a faster aircraft comes up from behind a slower vehicle and then sideslips or turns in front of it. If this happens in your game, simply move the slower vehicle's counter through the faster one's—in this case, that doesn't cause a collision.

Collision Damage

When an aircraft runs into another object, it takes 1d6 damage for every 10 mph of relative speed (calculate this in the same way as you would for a shot from one vehicle to the other). Subtract the vehicle's Size modifier and the level of the vehicle's Armor at the point of impact (Armor works differently in a crash—instead of reducing the die *type*, it reduces the number of dice) from the number of dice suffered. Add the Size modifier of the object struck to the number of dice. In the case of vehicles, the maximum modifier is +6, while large, immobile objects like mountains and buildings have sizes of +10.

Passenger Damage

A collision not only hurts the vehicle, but it can shake up the passengers pretty badly also. The amount of damage the passengers take depends on how securely they are strapped in. Riders who are not secured take half the number of dice in damage that the

vehicle does. Riders who are wearing their seat belts (or are otherwise strapped in) reduce the number of dice taken by –4.

All collision damage is massive damage.

> Bob's ultralight (Size +2, Armor 0) buzzes into a 747 (Size +6, Armor 1) at a relative speed of 100 mph. The base damage is 10d6. The ultralight actually takes 14d6 (10-2+6) damage (bye, Bob!) and the 747 takes 5d6 (10-6-1+2). Bob is securely strapped into his flying machine so he takes 3d6 massive damage (14/2-4) from the impact.

Weapon Damage

Weapons at the point of impact take full damage from a collision.

Collision Crits

If a vehicle suffers enough damage in a collision to cause multiple criticals, roll a location for each one. If a passenger result comes up, select one at random. This brainer gets to take an additional 3d6 damage as a portion of the vehicle crumples into him.

Losing Control

A collision with another vehicle can really mess with a person's concentration. Being in a collision requires a *flyin'* roll for each pilot involved (remember, if it's not your movement, hold off on the roll until just before your next move). The TN is Fair (5), modified by +1 for each 20 mph of collision speed (the speed that was used to work out the damage).

> Using the example above, the pilot of the 747 would have to make a *flyin'* roll against a TN of 10 (5+100/20) plus any modifiers due to the damaged suffered from the collision. In the unlikely event that Bob's ultralight survived the impact, he would also need to roll against the same TN.

Flying Mishaps

We've covered nearly everything you need to know to take to the skies, but there are a few special situations we need to cover before your brainer fires up his crate.

Losing An Engine

It's possible for your waster's flying machine to lose the use of an engine due to an engine or fuel critical. The effect this has depends on the type of aircraft your hero is piloting:

Fixed wing aircraft that lose all of their engines perform an automatic decelerate maneuver each phase and may not accelerate. Multi-engine planes have their Acceleration ratings reduced

penalty. Combine the aircraft's forward and downward speed to figure the damage when it impacts the ground.

LTA craft which lose their engines are at the mercy of the wind. They perform an automatic decelerate maneuver each phase until stopped and then drift in the direction of the wind (determined by the Marshal). The only maneuvers the craft can perform is a rotate to face into the wind, lift adjustment, and sideslip. While drifting, the aircraft doesn't have to worry about Drag.

Autorotation Landings

Unpowered rotary wing aircraft have one chance at getting to the ground in one piece: the autorotation landing. This involves disengaging the rotors from the engine and using the vehicle's forward motion to keep them spinning and producing lift.

Unpowered helicopters perform a decelerate maneuver each phase. This is important because the vehicle must now maintain a minimum speed of 30 mph. If the craft's speed drops below this, the rotors stop spinning and the vehicle begins flying like a whale doesn't—it accelerates at 20 mph straight down.

As long as the pilot keeps the craft's speed up, it can maneuver normally (although it can't power climb). Landing the thing requires a combination of a dive to put the chopper on the ground and a decelerate maneuver to kill its forward speed.

Belly Landings

Sometimes it's necessary to land an aircraft without the landing gear deployed. This requires a Fair (5) *flyin'* roll plus +1 for every 10 mph of the vehicle's speed when it touches down. Landing with partial gear is even harder—add +4 to the TN. If the roll is successful, the aircraft takes 1d6 damage per 10 mph of speed as it slides along. Failing the roll means the aircraft cartwheels out of control and takes 1d6 damage per 5 mph of speed to a random location each phase. The passengers also take collision damage each phase until the aircraft comes to a stop. In either case, it decelerates at 20 mph once on the ground.

by 5 mph and their top speeds lowered by 10 mph for each engine lost. In addition, all *flyin'* rolls made for the aircraft suffer an additional -2 penalty due to the unbalanced thrust produced by the remaining engines.

Rotary wing aircraft which lose all engines must perform an autorotation landing. This is described in detail below. Multi-engine rotary wing craft suffer the same effects as fixed wing for losing only partial power (many combat choppers have multiple engines for a single rotor as a backup system).

VTOL aircraft that lose their engines are out of luck—they just drop from the sky. The aircraft performs a decelerate maneuver each phase, while accelerating by 20 mph each phase straight down. The aircraft cannot climb, and all other maneuvers suffer a -4

Geronimo!

Some brainers jump out of perfectly functional aircraft on purpose, others bail out only after their enemies have turned their machine into a flying colander. Either way, your hero's going to want to have a parachute (or two) handy.

Once your waster leaps out into space, each movement phase he accelerates 20 mph straight down until he reaches a speed of 100 mph. If he makes a Fair (5) *Nimbleness* roll, he can drift up to 1/2" in any direction for each inch of downward movement he has.

After your hero opens his chute (which takes an action), his downward plunge slows by 40 mph per phase until he has slowed to a speed of 20 mph. Unless the brainer decides to get fancy, he continues to drift downward at this speed until he reaches the ground.

Gettin' Fancy

If your hero has the *flyin': skydivin'* Aptitude she can maneuver her parachute much like an unpowered aircraft.

Each movement phase the parachute drops 2". This happens regardless of any other movement it performs. With a Fair (5) *flyin': skydivin'* roll, your waster can make the parachute drift 1" in any direction for each inch it drops.

Your hero can also dive the parachute to pick up some forward speed. The first phase of a dive (when the parachute has no forward momentum), it can dive up to 2". This speed can be used to perform any of the standard maneuvers available to fixed wing craft except accelerate. The parachute performs a basic decelerate maneuver at the beginning of each movement phase. A standard parachute has a Handling of +2 and a top speed of 60 mph.

Landing

When the parachute reaches the ground, the skydiver must make a Fair (5) *Nimbleness* roll to avoid taking 2d6 damage to a leg. Each 5 mph of forward movement the parachute has when it lands adds +2 to the TN and increases the damage by +1d6.

Fixin' Up Your Crate

There are very few military aircraft gracing the skies of the Wasted West these days. Most of those that weren't destroyed in the war have broken down due to a lack of spare parts and regular maintenance. Of course, that doesn't mean the aircraft that *are* flying are unarmed—not by a long shot! The great majority of civilian aircraft pressed into service by the intrepid airmen of the post-Judgment West have some sort of weapon bolted, screwed, strapped, or otherwise fixed to it.

The Aircraft

Before we get into the nitty-gritty of modifying your aircraft, let's take a look at a selection of standard models and their statistics. Each aircraft has a number of common stats; anything out of the ordinary is listed in the Special Equipment portion of the entry.

Common Stats

Here's a quick review of the aircrafts' basic statistics:

Cost is the amount needed in trade to buy the basic aircraft as is. The cost of any modifications are extra.

Engine lists the number and type of engines the aircraft is equipped with.

Gas tank lists the size of the vehicle's fuel tanks in gallons. Multiplying this by the aircraft's MPG rating gives you how far the vehicle can travel on a full tank.

Acceleration is the amount by which the aircraft can increase its speed each movement phase.

Durability is the total amount of damage a vehicle can take before it stops working. The number after the slash is the amount of damage in each Durability Step.

Armor reflects the vehicle's resistance to damage. Unless extra armor is added, the general armor rating is the same over the entire vehicle.

Handling is a measure of how responsive the aircraft is to its controls and how quickly it recovers from radical maneuvers. Handling is a modifier to all *flyin'* rolls made for the aircraft.

Load limit is a measure of how much extra junk your hero can slap on his crate and still have it leave the ground. Each piece of equipment has a slot rating. If the total slots of extra equipment exceed the aircraft's Load Limit, performance suffers.

Mounting locations are places where weapons and equipment can be attached to the aircraft. The number following the location is the maximum amount of slots in gear and weapons that can be mounted there.

Cargo is the amount of free space in slots the vehicle has available for carrying cargo and special systems.

Biplane

There are still quite a few biplanes flying the skies of the Wasted West. Before the war, some saw use in air shows and sightseeing tours, but most were used for crop dusting.

Biplane

Cost	Passengers	Engine
$5000	2	Single piston
Gas Tank	**MPG**	**Handling**
30	5	+2
Top Speed	**Stall**	**Accel.**
100 mph	50 mph	10 mph
Durability	**Armor**	**Size**
30/6	0	+3
	Load Limit	
	75	

Mounting Locations: Fuselage (x2) 50, wing (x2) 70
Special Equipment: None

Blimp

No sporting event was complete without one of these enormous craft hovering over the stadium.

Blimp

Cost	Passengers	Engine
$20,000	8	Dual-piston
Gas Tank	**MPG**	**Handling**
100	5	-3
Top Speed	**Lift**	**Accel.**
60 mph	2"	5 mph
Durability	**Armor**	**Size**
100/20	0	+6
	Load Limit	
	200	

Mounting Locations: Gondola (x4) 125
Special Equipment: Electronic billboard, 100 slots of cargo space

Cargo Hauler

There were many workhorse-type aircraft in the skies of the Wasted West before Judgment Day. Many hauled rubber dog doo and other necessities of modern life.

Cargo Hauler

Cost	Passengers	Engine
$15,000	20	Dual Piston
Gas Tank	**MPG**	**Handling**
100	10	-2
Top Speed	**Stall**	**Accel.**
220 mph	80 mph	10 mph
Durability	**Armor**	**Size**
75/15	1	+5
	Load Limit	
	250	

Mounting Locations: Fuselage (x4) 200, wings (x4) 150
Special Equipment: Advanced autopilot, 1400 slots of cargo space

Executive Jet

These sleek aircraft were the transportation of choice of big movie stars and rich corporate executives. Now they're used mainly by egotistical warlords.

Executive Jet

Cost	Passengers	Engine
$10,000	8	Twin jets
Gas Tank	**MPG**	**Handling**
200	5	+2
Top Speed	**Stall**	**Accel.**
300 mph	85 mph	15 mph
Durability	**Armor**	**Size**
45/9	0	+3
	Load Limit	
	180	

Mounting Locations: Fuselage (x2) 100, wings (x2) 80

Special Equipment: Bucket seats, civilian autopilot, wet bar

Helicopter, Civilian

These all-purpose craft had many uses, from crop-dusting to sightseeing tours to traffic reporting. These craft are now popular scouting vehicles with the Sky Pirates.

Civilian Helicopter

Cost	Passengers	Engine
$8000	4	Single turbine
Gas Tank	**MPG**	**Handling**
50	10	+3
Top Speed	**Stall**	**Accel.**
150 mph	NA	10 mph
Durability	**Armor**	**Size**
30/6	0	+3
	Load Limit	
	150	

Mounting Locations: Fuselage (x2) 100

Special Equipment: 2-bladed rotor, 150 slots of cargo space

Helicopter, Military

These light transport choppers were the battle taxis of armies on both sides of the Mason-Dixon Wall. Unlike civilian helicopters, whose biggest threat was not hitting each other while filming high-speed chases on the Canyon Causeway, military choppers often had people shooting at them, so they're fully equipped with a number of sophisticated countermeasure systems.

Military Helicopter

Cost	Passengers	Engine
$20,000	10	Twin turbine
Gas Tank	**MPG**	**Handling**
120	5	+2
Top Speed	**Stall**	**Accel.**
150 mph	NA	10 mph
Durability	**Armor**	**Size**
45/9	0	+3
	Load Limit	
	300	

Mounting Locations: Fuselage (x2) 150, weapon wing (x2) 200, 560 slots of cargo space (without passengers).

Special Equipment: Decoy launcher, high-G reinforcement –1, IR jammer, radar jammer, 2-bladed rotor

Hot Air Balloon

Popular as recreational vehicles before the Last War, most hot air balloons still in use are employed as tethered observation posts by many of the larger survivor communities. Few brainers are foolish enough to travel the Wasted West at the mercy of the wind, but some do.

Hot Air Balloon

Cost	Passengers	Engine
$2000	4	None
Gas Tank	**MPG**	**Handling**
None	NA	0
Top Speed	**Lift**	**Accel.**
Wind	1"	NA
Durability	**Armor**	**Size**
20/4	0	+4
	Load Limit	
	50	

Mounting Locations: Gondola (x2) 50
Special Equipment: None

Jet Fighter

These high-performance mounts are highly sought after by Throckmorton and other would-be world conquerors despite their high maintenance and fuel requirements. The stats below are for a typical two-seater fighter-bomber like the Southern Alliance's F-32 Condor.

Jet Fighter

Cost	Passengers	Engine
$500,000	2	Twin jets
Gas Tank	**MPG**	**Handling**
1000	1	+2
Top Speed	**Stall**	**Accel.**
1500 mph	90 mph	30 mph
Durability	**Armor**	**Size**
60/12	1	+4
	Load Limit	
	300	

Mounting Locations: Fuselage hardpoints (x4) 200, wing hardpoints (x4) 100
Special Equipment: Afterburner, AQP-1100 radar, military grade autopilot, decoy launcher, ejection seat, high-G reinforcement -2, IR jammer, M-205 cannon, radar jammer, radar warning receiver

Prop, Single Engine

This category covers most light civilian recreational aircraft like the Piper Cub and the Cessna Skyhawk. Many of these aircraft survived the war at small local airports.

Single Engine Prop

Cost	Passengers	Engine
$6000	4	Single piston
Gas Tank	**MPG**	**Handling**
50	10	+2
Top Speed	**Stall**	**Accel.**
120 mph	50 mph	10 mph
Durability	**Armor**	**Size**
25/5	0	+3
	Load Limit	
	50	

Mounting Locations: Fuselage (x2) 75, wings (x2) 50
Special Equipment: Civilian autopilot, 50 slots of cargo space

Prop, Multi-Engine

This category covers most civilian twin-engine aircraft like the Beechcraft King Air and others. They can often still be found at civilian airports.

Multi-Engine Prop

Cost	Passengers	Engine
$8000	6	Twin piston
Gas Tank	**MPG**	**Handling**
100	8	+2
Top Speed	**Stall**	**Accel.**
220 mph	60 mph	10 mph
Durability	**Armor**	**Size**
35/7	0	+3
	Load Limit	
	90	

Mounting Locations: Fuselage (x2) 100, wings (x2) 80

Special Equipment: Civilian autopilot, 100 slots of cargo space

Ultralight

These light aircraft range anywhere from a hang glider with a lawnmower engine strapped to it to small single-seater aircraft built from a kit. Many of these aircraft can be quickly disassembled and stowed in the back of a truck.

Ultralight

Cost	Passengers	Engine
$3000	1	Single piston
Gas Tank	**MPG**	**Handling**
30	5	+4
Top Speed	**Stall**	**Accel.**
80 mph	40 mph	5 mph
Durability	**Armor**	**Size**
10/2	0	+2
	Load Limit	
	20	

Mounting Locations: Fuselage (x1) 30, wings (x2) 50

Special Equipment: None

VTOL, Civilian

These aircars had just become common in civilian use when the bombs fell. They were particularly popular with wealthy executives.

Civilian VTOL

Cost	Passengers	Engine
$15,000	4	Single piston
Gas Tank	**MPG**	**Handling**
30	5	+2
Top Speed	**Stall**	**Accel.**
175 mph	NA	15 mph
Durability	**Armor**	**Size**
35/7	0	+3
	Load Limit	
	80	

Mounting Locations: Fuselage (x2) 100

Special Equipment: Advanced autopilot, 100 slots of cargo space

VTOL, Military

VTOL aircraft had taken over many of the helicopter's battlefield roles prior to the Last War. Their high speed and maneuverability made them ideal for quick hit-and-run raids and for high speed troop insertions behind enemy lines.

Making Changes

Just as with their ground-bound counterparts, it's possible for mechanically inclined wasters to modify their flying machines. However, unlike the road warriors, the flyboys options are a bit more limited. Every ounce of weight can affect an aircraft's performance, so would-be aces need to be careful how much extra gear they strap on their mounts.

There's not much that can be done to affect an existing aircraft's Handling (at least not in a positive way), and because a high power-to-weight ratio is important for aircraft engines, most are already tweaked to give as much power as possible. That leaves three basic areas where a budding Pappy Boyington can alter his crate: armor, weapons, and special systems.

Armor

Unlike ground vehicles, aircraft have only one Armor value that applies to the entire craft. This armor is an intrinsic part of the aircraft's skin and frame and can't be modified without drastically altering the vehicle's balance and trim characteristics. In game terms, this means unless the aircraft is being designed from the ground up by a junker, you're stuck with the plane's basic armor.

However, particularly vital systems may have additional armor placed around them. This includes the passenger and cargo areas, the engine compartment, the weapons, the fuel tank, and any special systems the vehicle carries. That's the good news. The bad news is that because very little space is wasted inside aircraft, all slots of added armor—with the exception of that added to the cockpit and cargo areas—count double against the vehicle's Load Limit because it has to be bolted on the plane's exterior. This interferes with the plane's aerodynamics and greatly increases drag.

Passenger and cargo armor can be added to the vehicle's interior. The AV of the passenger area can only be increased by one level in this way; any more and it simply becomes too cramped. Slots used for armor added to

Military VTOL

Cost	Passengers	Engine
$100,000	2	Single piston
Gas Tank	**MPG**	**Handling**
100	2	+0
Top Speed	**Stall**	**Accel.**
225 mph	NA	20 mph
Durability	**Armor**	**Size**
45/9	2	+4
	Load Limit	
	150	

Mounting Locations: Fuselage (x2) 100, weapon wings (x2) 300

Special Equipment: AQP-1100 radar, ejection seat, high-G -2, military grade autopilot, radar jammer, radar warning receiver, decoy launcher

the cargo area is simply subtracted from the area's available slots. Additional armor can be added to these areas on the plane's exterior, but slots added in this way count double against the vehicle's Load Limit.

Armor costs $5 per slot added. Adding armor requires an Onerous (7) *tinkerin'* roll and takes an hour for every 20 slots added. Each raise on the roll lowers the time needed by 15 minutes. The number of slots required is summarized on the Aircraft Armor Table.

Weapons

Weapons can be added to an aircraft at any of its listed mounting points. The exact size of the weapon that can be mounted at a location is determined by the mount's rating; this varies from vehicle to vehicle.

The slot sizes for the most common aircraft weapons are listed in the Aircraft Weapons Table. If you wish to mount a weapon that's not listed there, consult the Frame Table in *The Junkman Cometh* and assume the weapon uses the maximum number of slots listed for its Frame size. If you want a more exact size, and don't mind a little number crunching, you can try designing the weapon using the junker rules in that book.

Each weapon must be assigned a mount type. There isn't room to fully explain all the possible mount and firing arc combinations here, so check the *Road Warriors* book for all the details.

There are four basic mount types. The slots listed for each of the mounts includes the controls needed to operate the weapon:

Articulated mounts allow a weapon a limited traverse of up to 90°. This uses slots equal to 10% of the weapon's.

Fixed mounts lock weapons in place where they can't be moved. They can only be aimed by turning the vehicle.

Aircraft Armor

Location	Slot Cost per AV Level
Passenger compartment	5 slots per passenger
Fuel Tank	1 slot per gallon
Cargo area	10% of cargo capacity
Weapons	10% of weapon's slots
Special equipment	10% of equipment's slots

Aircraft Weapons

Weapon	Ammo	Shots	Speed	ROF	Range	Damage	Slots	Cost
50 lb. Bomb	—	1	1	1	—	8d20, Burst 10	30	$750
100 lb. Bomb	—	1	1	1	—	12d20, Burst 10	60	$1000
250 lb. Bomb	—	1	1	1	—	15d20, Burst 10	100	$2000
250 lb. Smart Bomb	—	1	1	1	—	15d20, Burst 10	130	$4000
500 lb. Bomb	—	1	1	1	—	20d20, Burst 10	160	$3000
500 lb. Smart Bomb	—	1	1	1	—	20d20, Burst 10	200	$6000
AIM-9S Sidewinder	—	1	1	1	70"	4d12, Burst 10	45	$2000
AIM-140 AMRAAM	—	1	1	1	70"	4d20, Burst 10	75	$6000
Bushmaster	25mm AP	30	1	2	50	5d12 (AP 4)	125	$3000
	25mm HEDP	30	1	2	50	4d12 (AP 2), 3d8 Burst 5		
M-120	7.62mm	300	1	15	20	4d8	95	$1500
M-200	20mm	50	1	6	20	4d12	95	$2000
M-205	20mm	100	1	6	50	4d12	120	$3500
M2HB	.50	100	1	3	40	5d10	65	$1000
M-95 LGAT	—	1	3	1	20"	6d20 (AP 5), Burst 5	80	$3000
NA SAW	5.56mm	60	1	12	20	3d8	35	$1000
SA SAW	7.62mm	30	1	9	20	5d8	40	$1000

These are the most common mounts found on aircraft. This uses slots equal to 10% of the weapon's.

Pintle mounts basically place the weapon on a post. This requires some reinforcement of the aircraft's frame around the mount and gives the weapon a traverse of 180°. These are most often found on open cockpit aircraft and use slots equal to 5% of the weapon's.

Ring mounts are normally found on the roofs and bellies of aircraft and on some open cockpits. They allow a gunner to rotate the weapon a full 360°. This uses slots equal to 15% of the weapon's. The weapon can be enclosed for double this cost, creating a small blister turret. Belly-mounted weapons must be enclosed (or the gunner is going to have a long fall).

Mounting a weapon costs $1 times the combined slot cost of the weapon and its mount. It requires a Fair (5) *tinkerin'* roll and takes 1 hour per weapon. Each raise reduces this time by 15 minutes.

Hard Points

Hard points are a special type of mount. A hard point is an area of the craft which has been reinforced and equipped with mounting brackets capable of receiving most standard weapons and special systems like jamming pods, external fuel tanks, etc.

A hard point can be installed in any wing or fuselage mounting location. This uses up 10% of the location's available slots and costs $5 per slot. It also requires an hour of time and a Hard (9) *tinkerin'* roll.

Once installed, any weapon of a size less than the mounting location's remaining slot capacity can be mounted on the hard point. Installing a hard point in a location with an 80-point capacity, for instance would use 8 slots. This leaves 72 slots available to mount equipment at this location.

Hard points have a number of advantages over standard fixed mounts. The equipment mounted on a hard point

can be changed in 10 minutes time with an Easy (3) *tinkerin'* roll, and in an emergency, the equipment mounted on a hard point can be jettisoned with a single action. In addition, when carrying bombs or missiles, multiple weapons can be carried on a single hard point as long as their combined slot size doesn't exceed the mount's capacity.

Ammo

A mounted weapon has enough room for one full load of ammo, but sometimes that just isn't enough to get the job done. Wing and fuselage mounting locations can also be used to store additional ammo for a weapon in an adjacent mount (this only works for automatic weapons, single shot weapons like missiles and bombs must be mounted individually).

The number of slots required for this depends on the weapon's ammo size. Standard ammo sizes are listed in *The Junkman Cometh*. Just multiply the ammo size by the number of rounds you wish to store to find the slot cost. Adding ammo storage costs $1 per slot and requires 10 minutes and a Fair (5) *tinkerin'* roll.

Special Systems

Special systems covers anything else you might want to install in your brainer's aircraft that isn't a weapon. This includes things like radar and jammers, flare dispensers, and 8-track players. Special systems can be installed at any mounting location (although putting your 8-track player on the wing will make it hard to change the tapes), in the aircraft's cargo space, or on a hard point.

Getting More Room

If your waster needs more room for his funkadelic, quadraphonic stereo system, and she doesn't have many friends, she can free up some space in the aircraft by removing passengers. Each passenger location removed from the aircraft frees up 70 slots in enclosed cabins or 35 slots in open cockpit aircraft. This amount can be subtracted from any equipment already added.

The Performance Hit

Once you've added all the extras to your flying chariot, total up the number of slots of added equipment and compare this to the aircraft's Load Limit. If the number of slots is less than the Load Limit, you're in good shape. If it's more, your vehicle's performance is going to suffer.

If you've gone over, divide the added slots of equipment by the Load Limit. For every full multiple of the Load Limit in extra equipment, the aircraft's top speed drops by 5 mph and its Handling is reduced by -1.

In addition, for every two full multiples of the Load Limit in extra equipment, +1 is added to all drag rolls made when the aircraft maneuvers, and the aircraft's Stall speed (if it has one) increases by 5 mph. Lastly, LTA aircraft have their Lift rating reduced by 1" for every two multiples of their Load Limit carried. An aircraft carrying four times its Load Limit in extra equipment, for instance, would have its top speed reduced by 20 mph, its Handling reduced by -4, +2 added to all drag rolls, and its stall speed increased by 5 mph. An LTA craft would also lose 2" of lift.

Aircraft with more than six times their Load Limit in extra equipment are not getting off the ground.
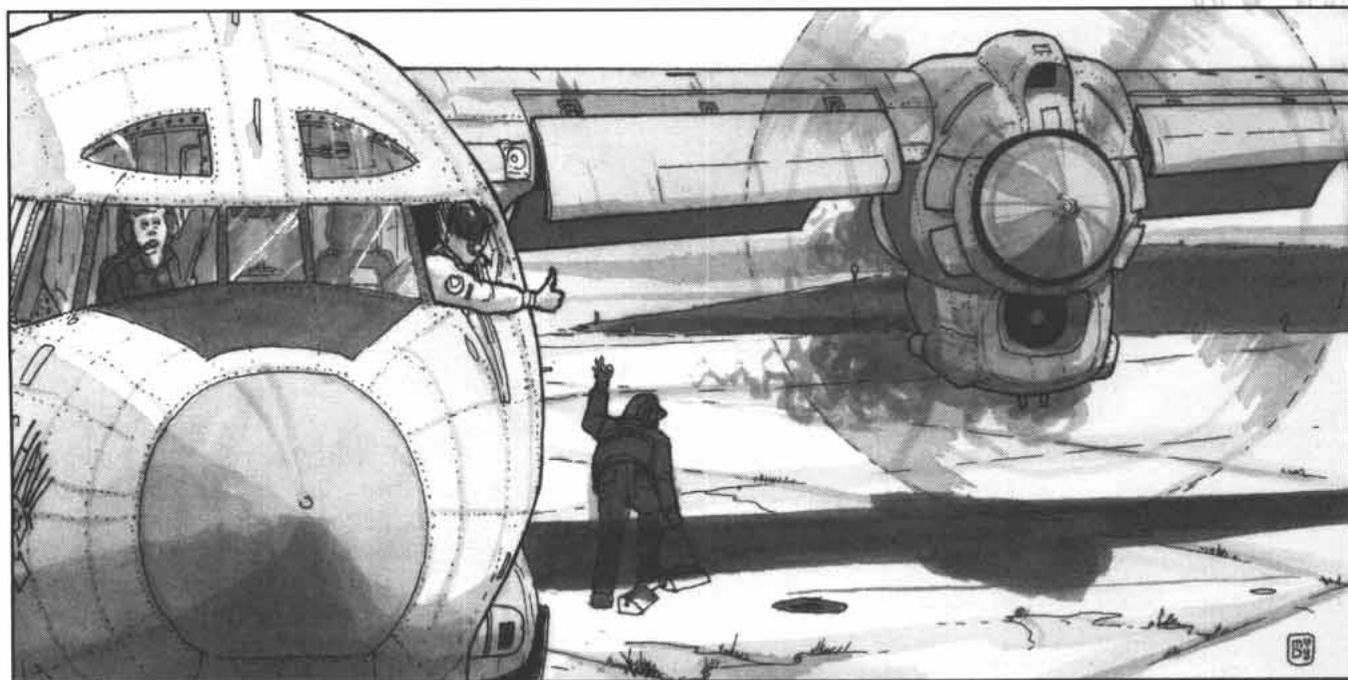
If you're not satisfied with your crate's performance, the only answer is to reduce the amount of extra equipment, or ditch some weight in the form of extra passengers as described earlier (not while airborne, please).

New Equipment

Now that your hero is airborne, there are a few new items of equipment he might be interested in. These systems are summarized in the Aircraft Systems Table.

Aerial Targeting Computer

This computer was developed specifically for aerial combat. It includes a HUD system which displays a targeting reticle showing the projected impact point of the aircraft's weapons. The computer negates the -2 "shooting from a vehicle" modifier, and, if the aircraft has a radar lock on its target, it also halves all modifiers for range and relative speed. When used with bombs, it halves the penalties for altitude and speed.

AQP-1100 Radar

This is one of the standard Northern Alliance airborne radar systems. It was used in both the F-22E Lightning and the F-40 Tigershark. It can detect airborne contacts at a range of 100 miles and ground targets at half this range in all weather conditions.

Decoy Launcher

This system is used to spoof incoming missiles. When activated, it launches a steady stream of chaff or flares behind the aircraft. It takes a single action to activate the launcher. It can be set to launch flares, chaff, or both simultaneously. Once engaged, it launches a flare or chaff bundle at the start of each movement phase.

All sensors of the appropriate type (infrared sensors for flares, radar systems for chaff) attempting to maintain a lock on the aircraft must roll their sensor ratings versus the decoy's rating of 3d6.

If the aircraft is equipped with a radar warning receiver, the launcher can be set to automatically begin launching chaff whenever a radar lock-on is detected.

The launcher holds 30 chaff bundles and 30 flares. Replacement decoys cost $20 each for flares and $60 a piece for chaff bundles.

Ejection Seat

This system can't be added to an existing aircraft, it either has one or it doesn't. However, some of the military aircraft your hero might run across are equipped with these devices. An ejection seat takes one action to activate. Once activated, the aircraft's canopy is jettisoned, and the seat blasts clear of the vehicle, shooting 10" straight up. The occupant of the seat must make a Hard (9) *Vigor* roll or take 3d6 damage to the guts.

On the following movement phase, the seat's parachute deploys and both the seat and its occupant drift to the ground. Unlike a standard parachute, the seat's occupant has no control over the parachute's direction of drift; it simply goes with the wind.

AIM-9S Sidewinder

The AIM-9S is the latest model of the US Air Force's venerable Sidewinder missile. It has an all-aspect, heat-seeking guidance system. The range listed for it on the Aircraft Weapons Table is the distance it can cover in a single movement phase. The AIM-9S has a 4d10 *flyin': missile* Aptitude.

AIM-140 AMRAAM

The AIM-140 is a radar-guided, fire-and-forget missile. As with the Sidewinder, the range listed for it on the Aircraft Weapons Table is the distance it can cover in a single movement phase. The AIM-140 has a 4d10 *flyin': missile* Aptitude.

IR Jammer

This handy little device pulses waves of infrared energy out in an attempt to confuse the sensors of heat-seeking missiles. Activating it requires an action. Once turned on, all infrared missiles tracking the aircraft must win a contest of sensor ratings with the jammer at the beginning of each movement phase to remain locked on the target. The jammer becomes incredibly hot; it automatically shuts down after six rounds to cool for an equal length of time.

M-205 Cannon

The M-205 is the standard aircraft cannon of the Confederate Air Force. It combines the punch of a 20mm with superb long-range accuracy.

Parachute

You never know when your brainer may need to bail out, so it's a good idea to have a few parachutes handy. Parachutes come in two basic varieties, round and wing-shaped. Round canopies have a Handling of 0; wing-shaped canopies have a Handling of +2.

Radar Jammer

The radar jammer attempts to prevent other radars from locking-on by broadcasting a signal that overwhelms the enemy radars' own. The jammer takes an action to activate. Once turned on, all radars attempting to lock onto the aircraft must win a contest of sensor ratings.

Because the jammer broadcasts a radar signal, it makes the aircraft visible to passive radar sensors like the radar warning receiver.

Radar Warning Receiver

The RWR is a passive sensor that detects other radars. Once a radar is detected, it appears on a display in the cockpit which shows its range and direction from the aircraft. The RWR can also tell the pilot whether the radar is in search or tracking mode and sounds an alarm whenever a radar locks on to the aircraft.

Flyin' Junkers

Last, but not least, we've got some new powers for those techno-mages who want to take to the skies. In no time at all, your junker can have her very own home-built aircraft.

Ejection Seats

Ejection seats may be added to any aircraft built with the *jet, prop,* or *VTOL* power. This increases the slot cost per passenger by 50 for each passenger so equipped.

Balloon

Associated Spirit: Car
TN: 3
Components:
    Chemical: Special
    Electronic: None
    Mechanical: 10%
    Structural: 10%
Drain: Frame per hour

The *balloon* power is used to create light-than-air vehicles. Your junker can use this power to make anything from a simple hot air balloon to a high-flying blimp (and if he knows the *commo* power, he can even put a flashing billboard on the side).

Aircraft Systems

System	Sensor Rating	Slots	Cost
Aerial Targeting Computer	NA	25	$5000
AIM-9S	3d8	45	$2000
AIM-140 AMRAAM	4d10	75	$6000
AQP-1100 Radar	4d12	50	$3000
Decoy Launcher	3d6	40	$1500
IR Jammer	3d6	25	$2000
M-95 LGAT	3d10	80	$3000
Parachute	NA	NA	$100/$150
Radar Jammer	4d10	25	$3000
Radar Warning Receiver	4d10	20	$1500

Frame Size

The Frame Size for an LTA vehicle is determined by its payload area—the place where all the passengers and cargo goes. You can either pick a size to start with, or you can simply add passengers, cargo space, armor, and weapons in the same way as described for the *locomotion* power (see *The Junkman Cometh* for details) and see where you end up. Weapons and other equipment which are built in to the vehicle when it is first constructed don't count against its Load Limit; those added later do.

Power

Once you've added all the other goodies to your air carriage, it's time to decide whether you prefer to drift with the wind or be the master of your own destiny and add some engines. Unpowered LTA vehicles are at the mercy of the winds (and the Marshal); powered airships can go where they please. Total up the number of slots used so far. The number of slots required for engines is equal to 5% of this total for each 5 mph of Acceleration desired. The maximum Acceleration for an airship is 15 mph.

The slots devoted to power can be divided up into multiple engines if desired. This reduces the chance that the craft is left powerless by an engine critical. The only restriction to this is that the engines must be equal in size and they must be 30 slots or larger (smaller engines must be a single unit). A craft with 70 slots in engines, for instance, could divide the power into two 35-slot engines. A vehicle with only 50 slots devoted to power could not divide the points because the engines would be smaller than 30 points.

Drain for a powered airship is equal to the Frame size of its payload area per hour. Unpowered LTA vehicles have a Drain of 1 per hour. This is the energy needed to run the heaters, gas compressors, etc. that are used to fill the gas bag. To figure mileage for a spook juice powered craft, subtract its Frame size from 30 and multiply by 3. A fuel system can be added to the vehicle for the usual cost of 10 slots per gallon, but remember that these slots are included in the total when computing the engine size.

Once you've added all the features you want to your airship, total up the slots used. This number is used to determine the vehicle's Frame size. The component costs listed above are for the payload section of the aircraft. Costs for the gas bag are figured separately (see below).

Lift

Once the engines are in, it's time to compute the size of the gas bag that gives the vehicle its lift. The number of slots needed for the gas bag is equal to twice the total slots used for the payload area. The cost to build this is 10% of the gas bag slots in structural components.

The amount of lift generated by the gas bag depends on whether the airship uses hot air, helium, or hydrogen for lift. Hot air provides 1" of lift per movement phase, helium provides 2", and hydrogen 4". Increasing the size of the gas bag increases lift by a like amount. Increasing the size of the gas bag on a helium-filled blimp by 50%, for instance, would increase the lift from 2" to 3". The maximum lift possible is 5".

Using hydrogen or helium increases the component cost of creating the gas bag by +10% chemical (this component cost is applied only against the gas bag slots). In addition, the aircraft needs to replenish its gas supply every 100 hours of operation. This requires chemical components equal to 1% of the gas bag's slot size. Each 100 hours that pass without replenishing the supply reduces the vehicle's total lift by 1".

Finishing Touches

There are a few final statistics to compute for your new air carriage:

Handling is equal to 10 minus the craft's Frame size. Maximum Handling is +6; minimum Handling is -4.

The vehicle's top speed is equal to 50 mph plus twice its Acceleration rating.

The vehicle's Load Limit equals 5% of the gas bag's slot cost times the craft's Lift rating.

Durability is based on the Frame size of the payload area.

Loving Care

As with other car-spirit-based powers, raises on the roll to create the vehicle do more than just raise the device's Stability. Each raise on a *balloon* roll can be used to increase the craft's Handling by +1, its Load Limit by +10%, or its top speed by 5 mph.

Jet

Associated Spirit: Car
TN: 7
Components:
   Chemical: None
   Electronic: 5%
   Mechanical: 15%
   Structural: 10%
Drain: Special

Junkers with this power can zip around the Wasted West in style. The *jet* power allows techno-shamans to build fixed-wing, jet aircraft.

Frame Size

Just as with *balloon*, the Frame size of a jet aircraft is determined by the size of its fuselage. Unlike balloons, however, you must select a Frame size beforehand because the slots needed for a number of components are based on this size.

As before, you can add passengers, cargo space, weapons, and special equipment as described in the *locomotion* power.

Also, like vehicles made with the *balloon* power, fixed-wing aircraft get some free slots. Unlike balloons, however, you can actually use these slots for something more useful than storing hot air. A fixed-wing airplane has an additional number of slots equal to half of those listed for its Frame size. These slots are evenly divided between each wing, so essentially each wing has one quarter of the Frame's slots available (round down). Wing slots can

be used to mount weapons, equipment, hard points, fuel tanks, landing gear, engines—anything but passengers.

Actually, they aren't completely free. Add the wing slots to the Frame's slots when figuring component costs.

All weapons and equipment built into the jet at the time of its creation do not count against its load limit.

Landing Gear

Due to the high speeds they are capable of, jets must have retractable landing gear (unless they want to have it ripped off in flight). This costs a number of slots equal to the plane's Frame size times 5 and may be built into the fuselage or divided evenly between the wings and the fuselage.

The Engine

The heart of a jet is its engine. The jet engine requires a number of slots equal to 10% of the Frame's total slots for each 5 mph of Acceleration desired. The maximum Acceleration rating for a jet is 30 mph. These slots can be divided between the wings and fuselage as long as they are divided evenly and each engine has a size of 60 slots or more (smaller engines must be built as a single unit). A jet with 180 engine slots, for example, could have three engines: one in each wing and one in the fuselage.

Unlike other junker vehicles, jets may only be powered by spook juice; G-ray-powered fans just don't have enough oomph to achieve jet speeds. To figure the mileage the engine gets on this arcane liquid, subtract its Frame size from 20 and multiply by 2. Better make sure you put some large fuel tanks in!

Afterburners

If your brainer really wants to pull some Gs, you can add an afterburner system to the engines. This increases the total number of slots needed for the engines by 20%. Using the same example, a jet with 180 slots in engines would have that requirement increased by 36 slots (20% x 180). This cost is spread evenly between the three engines, increasing the size of each engine to 72 slots (60 + 12).

When activated, the afterburner increases the jet's Acceleration by an additional 10 mph by dumping fuel directly into the jet's exhaust. Unfortunately, not being very fuel-efficient, afterburners gobble down a half gallon of fuel *per engine* each round (or portion thereof) they are used. The three-engined jet of our example would burn a gallon and a half of fuel each round of operation.

If your flyboy plans on doing a lot of turning and burning, an aircraft with fewer, larger engines is more fuel-efficient than one with multiple, smaller engines. Either way you're going to need some large fuel tanks.

Wings o' Speed

The stall speed and the maximum speed of your aircraft is dependent on its wing type. You have three choices straight wing, swept wing, or swing wing.

Straight wing jets create more lift, but they also cause more drag, especially at speeds approaching Mach 1. They have a stall speed equal to 100 mph minus Acceleration (without afterburners) and a maximum speed of Acceleration times 20.

Swept wings jets create less lift, but they are capable of supersonic speeds. They have a stall speed of 120 mph minus Acceleration and a maximum speed of Acceleration times 50. However, the number of available slots in each wing is reduced by 20%.

Swing wing jets cheat and get the best of both worlds. The wings swing forward at low speeds and swing back when the pilot feels a need for speed. If you want to see an example of these planes, take a look at the F-14 Tomcat or the Mig-23 and Mig-27. Swing wings figure stall speed as if a straight wing aircraft and maximum speed as if a swept wing. The slots available in the wings of one of these jets is reduced by 30%, however, due to the swing wing mechanism.

Finishing Touches

Let's figure out the remaining statistics of your brainer's personal rocket:

Handling is found by subtracting the vehicle's Frame size from 12 and then adding +1 for each 5 mph of Acceleration rating (maximum of +6, minimum of -4).

Durability is figured as normal for the vehicle's Frame Size.

The aircraft's Load Limit is equal to 20% of the Frame's total slots.

Each raise on the construction roll can be used to increase Handling by +1, increase the Load Limit by 25%, increase the top speed by 20 mph, or lower the stall speed by 5 mph.

Prop

Associated Spirit: Car
TN: 5
Components:
    Chemical: None
    Electronic: None
    Mechanical: 10%
    Structural: 10%
Drain: Frame size per hour

Junkers who don't want to have to pick their eyes out of the back of their skulls might prefer something a little slower than a personal rocket. The *prop* power is for them. It allows junkers to build prop-driven, fixed-wing aircraft.

Frame

It's necessary to pick a Frame size for your crate before you start building. The Frame size is based on the plane's fuselage. Like *jet*, the craft gets a number of extra slots equal to 50% of the Frame's slots divided evenly between the wings. These slots can be used in the same way and are added to the Frame's slots when calculating component costs.

Landing Gear

Prop-driven craft can have fixed or retractable landing gear. Fixed landing gear takes up no additional slots, but limits the aircraft's top speed. Retractable landing gear takes up slots equal to five times the vehicle's Frame size and allows a higher top speed.

The Engine

A prop aircraft requires a number of slots equal to 5% of the Frame's total slots for each 5 mph of Acceleration desired. The maximum Acceleration rating for a prop aircraft is 20 mph. These slots can be divided between the wings and fuselage as long as they are divided evenly and each engine has a size of 30 slots or more (smaller engines must be a single unit).

The Drain for a propeller-driven aircraft is equal to its Frame size. If your crate flies on spook juice, subtract its Frame size from 20 and then multiply by 4 to determine how many miles it gets per gallon.

Speed

The stall speed for a prop-aircraft is equal to half its Frame size multiplied by 10.

The aircraft's top speed depends on its landing gear. Fixed gear aircraft have a top speed equal to their Acceleration times 10 plus 20. Planes with retractable gear have a top speed equal to their Acceleration times 20 plus 20.

Multi-Wing Aircraft

Prop jobs can have more than one set of wings. Brainers in the mood to do some barnstorming may want to add a wing or two. The added wings increase the aircraft's available lift at cost in speed due to increased drag

Adding a wing uses up 50% of the slots in the new wing (which like the first pair of wings has 50% of the Frame's slots) and the wing below it—for a net gain of zero slots. Each wing added to the aircraft (maximum of two additional wings) lowers both the plane's top speed and stall speed by 5 mph (minimum stall speed is 10 mph), adds +1 to its Handling, and increases its Load Limit by 20%. Even if they have retractable gear, multi-wing aircraft figure their top speeds as if they have fixed gear.

Finishing Touches

Let's figure out the remaining statistics of your brainer's crate:

Handling is found by subtracting the vehicle's Frame size from 10 and then adding +1 for each 5 mph of Acceleration rating (maximum of +6, minimum of –4).

Durability is figured as normal for the vehicle's Frame Size.

The aircraft's Load Limit is equal to 10% of the Frame's total slots.

Each raise on the construction roll can be used to increase Handling by +1, increase the Load Limit by 25%, increase the top speed by 10 mph, or lower the stall speed by 5 mph.

Rotor

Associated Spirit: Car
TN: 3
Components:
   Chemical: None
   Electronic: 5%
   Mechanical: 15%
   Structural: 10%
Drain: Frame size per hour

Call 'em what you will—choppers, whirlybirds, flying eggbeaters—the *rotor* power is about building them. Whether your brainer's looking to create a small puddlejumper or a massive transport helicopter, we've got you covered.

Frame Size

As you may have guessed by now, the Frame size of a helicopter is determined by the size of its fuselage. However, unlike the other aircraft we've discussed, choppers don't get any free slots. Of course, they don't have to worry about dropping out of the sky if they go too slow, and they can fly sideways and backward, so it ain't all bad news.

You need to select a Frame size before you go filling your chopper up with goodies since a number of component sizes are based on it.

Landing Gear

Your new whirlybird comes with skid-type landing gear at no cost in slots. Adding retractable wheels costs slots equal to the craft's Frame size times 5. The aircraft can also be equipped with pontoon landing gear at a cost in slots of Frame size times 10.

Weapon Wings

Both rotary wing and VTOL aircraft can mount weapon wings. These are short, stubby wings that stick out from the sides of the aircraft. They are equipped with pylons that can hold multiple weapons.

Weapon wings are always installed in pairs to keep the aircraft balanced. Equipping your craft to carry them requires installing hard points on each side of the vehicle. Each hard point takes up a number of slots equal to 10% of the total slots in weaponry and equipment the wing is designed to carry. A wing designed to carry 200 slots of weapons, for instance, would require a 20-slot hardpoint.

Equipment carried on the weapon wings is applied against the vehicle's Load Limit as normal. The wings and all the equipment on them can be jettisoned with a single action.

The Engine

A helicopter requires a number of slots equal to 10% of the Frame's total slots for each 5 mph of Acceleration desired. The maximum Acceleration rating for a chopper is 15 mph. It's not uncommon for a helicopter to have twin engines as a safety measure, so these slots can be divided up into two engines. The slots must be divided evenly, and the engines must be 30 slots or larger.

The Drain for a helicopter is equal to its Frame size. If your crate flies on spook juice, subtract its Frame size from 20 and then multiply by 4 to determine how many miles it gets per gallon.

Speed

Choppers have a top speed equal to their Acceleration rating times 10 plus 50.

Finishing Touches

Let's finish off your whirlybird:

Handling is found by subtracting the vehicle's Frame size from 12 and then adding +1 for each 5 mph of Acceleration rating (maximum of +6, minimum of -4).

Durability is figured as normal for the vehicle's Frame Size.

The aircraft's Load Limit is equal to 30% of the Frame's total slots.

Each raise on the construction roll can be used to increase Handling by +1, increase the Load Limit by 25%, or increase the top speed by 10 mph.

VTOL

Associated Spirit: Car
TN: 3
Components:
  Chemical: None
  Electronic: 10%
  Mechanical: 20%
  Structural: 10%
Drain: (Frame + (Acceleration/5))/Hour

We originally covered VTOL aircraft in *The Junkman Cometh*, but now that we have these spiffy new aircraft rules, the *VTOL* power description needed some updating.

Frame Size

A VTOL's Frame size is based on the size of its fuselage and it must be selected in advance. Like rotary-wing craft, VTOLs get no free slots, but they can mount weapon wings.

The Engine

To allow more diverse designs, we're changing the VTOL engine rules slightly. VTOLs must pay 15% of a Frame's total slots for each 5 mph of Acceleration desired. The maximum Acceleration for an aircar is 20 mph.

Mileage for VTOLs has changed slightly. Drain is still equal to Acceleration divided by 5 plus the Frame size. Spook juice mileage is found by subtracting the Frame size from 20 and multiplying the result by 2.

Jet Packs

It's still possible to make jetpacks using this power. Simply build a Frame 5 VTOL and devote 5 slots to controls for the wearer. Figure the engine size and Acceleration using the updated method described above.

Speed

VTOLs have a top speed of 25 mph plus 10 times the vehicle's Acceleration. Since most people aren't very aerodynamic, jet packs have a top speed of 25 mph plus 5 times the pack's Acceleration.

VTOLs still have a maximum altitude of 3000 yards (600").
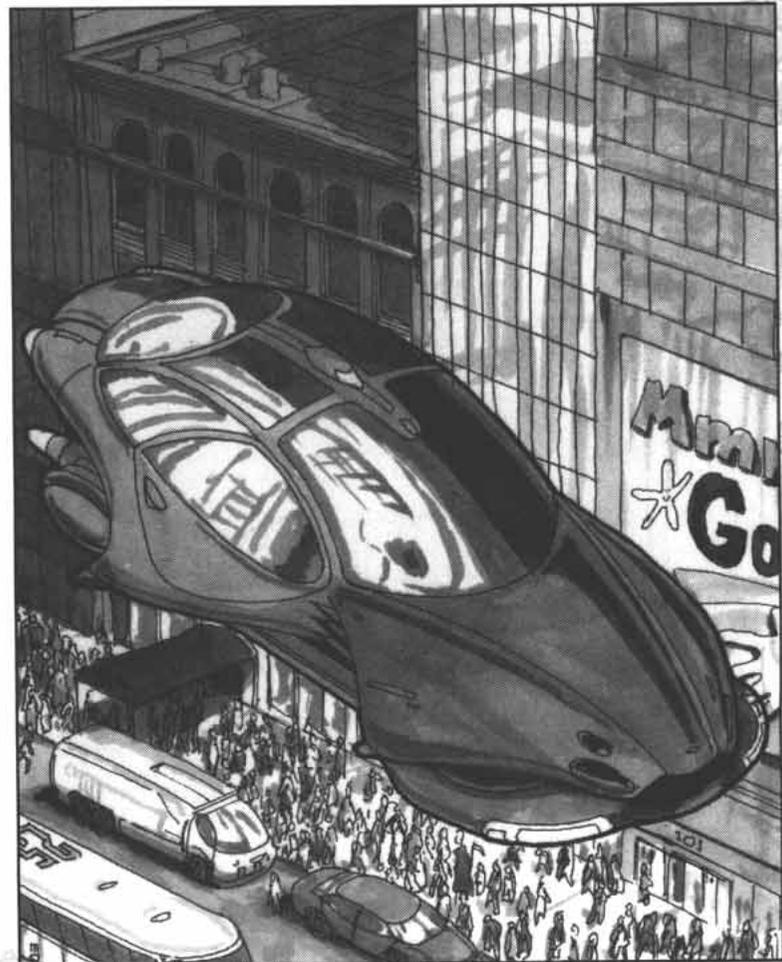
Finishing Touches

Let's round out your shiny, new aircar's statistics:

Handling is found by subtracting the vehicle's Frame size from 10 and then adding +1 for each 5 mph of Acceleration rating (maximum of +6, minimum of -4). Handling for jet packs is figured by subtracting the Frame size from 8. They gain no bonus from their Acceleration rating.

Durability is figured as normal for the vehicle's Frame Size.

The aircraft's Load Limit is equal to 10% of the Frame's total slots.

Each raise on the construction roll can be used to increase Handling by +1, increase the Load Limit by 25%, or increase the vehicle's top speed by 20 mph.

Engine Criticals

Roll	Effect
2	**Engine Blows:** The aircraft's engine explodes, doing 3d6 damage (ignore armor) to its body (wing, if the aircraft has multiple engines). This engine is history.
3	**Engine Fire:** The aircraft catches fire. This does 1d6 damage (ignore armor) to the vehicle the first round. At the beginning of each round after the first, the damage increases by +1d6. Shutting the engine off puts the fire out on a 1 or 2 on 1d6 (roll at the beginning of each round).
4	**Engine Overheating:** The engine is running dangerously close to the red line. Performing an accelerate maneuver causes 1d4 damage (ignore armor) to the engine.
5	**Engine Dies:** The engine sputters and stalls. It takes an action and a Fair (5) *flyin'* roll to restart the engine.
6	**Losing Power:** The vehicle's Acceleration rating drops by 5 mph. This effect is cumulative if it occurs more than once.
7	**Lucky!** No additional effect.
8	**Sputter:** The engine comes close to stalling but doesn't quite die. The vehicle immediately suffers 1d4 points of Drag.
9	**Running Rough:** The aircraft's top speed drops by 1d4 times 5 mph. This effect is cumulative if it occurs more than once.
10	**Smokin'!:** The aircraft's top speed drops by 1d6 times 5 mph. It also leaves a trail of dark, oily smoke behind it. All *shootin'* rolls through this cloud suffer a -2 penalty, as do all *flyin'* rolls made inside it.
11	**Oil Leak/Unbalanced turbine:** If the aircraft has a piston engine, it's losing oil. The windshield is coated with an oily grime that causes a -4 penalty to all *shootin'* and *drivin'* rolls. If the aircraft is a jet or has a gas turbine engine (most helicopters), damage to the turbine blades has unbalanced it. Either way, roll 1d6 each phase that the engine continues to run. On a 6, the engine locks up suddenly and showers the passenger compartment with metal fragments that do 3d8 damage.
12	**Engine Blows:** See 2 above.

Fuel Tank Criticals

Roll	Effect
2	**Ka-boom!** The fuel tank goes up in a flash. This does 3d20 damage plus 1d20 for each 5 gallons left in the tank. Ignore the aircraft's armor
3	**Boom!** The tank explodes, but the massive hole vents the force of the explosion away from the vehicle. The explosion does only 3d8 damage (ignore armor), and knocks the aircraft 1d6" in a random direction (roll 1d12).
4	**Pump Hit:** The fuel pump has been knocked out. The aircraft is now unpowered.
5	**Fuel Supply Interrupted:** The engine cuts out for 1d4 movement phases and then restarts.
6	**Big Hole:** Lose 2d6 gallons of fuel.
7	**Lucky!** No additional effect.
8	**Steady Leak:** The aircraft loses 1 gallon of fuel per round.
9	**Gushing:** The aircraft loses 1d4 gallons of fuel per round.
10	**Tapped Out:** A large hole at the bottom of the tank drains all fuel from the aircraft in 1d4 rounds.
11	**Fuel Fire:** The fuel leaking from the punctured tank has caught fire. This does 1d6 points of damage per round. Each round the fire burns, roll 1d6. On a 6, the aircraft suffers a **Ka-Boom!** result.
12	**Ka-Blam!:** The aircraft disintegrates and everyone onboard takes 5d20 damage before plunging to their doom.

Fuselage Criticals

Roll	Effect
2	**Collapse:** A major structural member gives way. The aircraft's fuselage rips in two, spilling its occupants out for a long fall.
3	**Saggy:** The much abused airframe sags in the middle. All *flyin'* rolls are at a -2 modifier. If the aircraft suffers any damage to the fuselage from a high-G maneuver, the aircraft collapses (see above).
4	**Ragged Hole:** A portion of the aircraft's fuselage has been bent outward. This creates a hole as in the **Hole** result below, plus the ragged pieces of wreckage hanging in the airstream creates 1d4 points of Drag each phase. Roll 1d6 each phase. On a 6, the piece creating the drag falls off, treat this now as a regular **Hole** (see below).
5	**Hole:** A portion of the fuselage falls off, taking any armor with it. There is a hole on that side of the aircraft which can be targeted at a -4 penalty. Shots hitting the hole

bypass the vehicle's armor. In addition, if the aircraft is above 10,000 feet, the cabin depressurizes. Anyone not strapped in must make a Hard (9) *Strength* roll to avoid being blown out the hole.

Roll	Effect
6-8	**Lucky!** No additional effect.
9	**Blew the Doors Off:** A randomly chosen door or hatch falls off the vehicle. This opening can be targeted at a -2 penalty; shots hitting it bypass the aircraft's armor. In addition, the cabin depressurizes. See **Hole** for details.
10	**Bent:** The aircraft's frame is bent by the force of the blow. Its Handling rating drops by -2.
11	**Warped:** The aircraft's body has been horrendously warped by the force of the blow. The Drag rating of all maneuvers is increased by +1. The aircraft's Handling rating drops by -4.
12	**Disintegration:** The aircraft's frame can no longer withstand the stresses of flight and it's beginning to break up. Each round the craft remains airborne, it takes 1d6 damage to its fuselage.

Gas Bag Criticals

Roll	Effect
2	**Oh, the Humanity:** The airship's gas bag empties out with a whoosh and the craft falls from the sky. If the vehicle uses hydrogen as a lift gas, the gas bag explodes for 6d20 damage plus 1d20 for each point of the vehicle's size modifier. This blast has a Burst Radius of 10 yards.
3	**Major Leak:** The airship is losing lift fast. The craft loses 1d6" of altitude per phase.
4	**Minor Leak:** The craft loses 1d4" of altitude per round.
5	**Drop:** The bag dumps some gas but then quickly seals. The craft loses 1d6" of altitude.
6-8	**Lucky!** No additional effect.
9	**She's Gonna Blow!** The burner or gas release valve sticks, constantly inflating the gas bag. The craft climbs 1d4" per phase. Roll 1d6 each movement phase. On a 6, the bag bursts and gains a **Major Leak.**
10	**Sideslip:** Gas venting from the bag is pushing the airship to one side. For each inch moved forward, the airship drifts 1/2" to one side. If hovering, the craft still drifts 1/2" each phase. Determine the drift direction randomly.
11	**Flapping in the Breeze:** A portion of the gas bag has ripped and is flapping around. The Drag rating of all maneuvers is increased by +1.
12	**Bag Fire:** The gas bag has caught fire. It takes 1d6 damage per round. If the craft uses hydrogen for lift, treat this as **2 Oh, the Humanity.**

Landing Gear Criticals

Roll	Effect
2-3	**Trashed:** The landing gear is destroyed. The aircraft is going to have to belly in for a landing.
3-5	**Jammed:** The landing gear is stuck in its last position. If up, the aircraft is going to have to make a belly landing. If down, the Drag roll for all maneuvers is increased by +1.
6-8	**Lucky!** No additional effect.
9-10	**Partial Jam:** Only half the gear is still operational. Landing with only partial gear increases the difficulty by +4.
11-12	**Try Your Luck:** The landing gear deploys but won't lock. When landing, roll a die. On an even result, the gear stays in position. On an odd result, the gear collapses and the aircraft bellies in. The *flyin'* roll TN to make the landing is increased by +4.

Rotor Criticals

Roll	Effect
2	**Going Down?** The rotors separate from the aircraft. It accelerates toward the ground at 20 mph per phase.
3	**Stressed:** The rotors have been overstressed. If the rotors take any further damage from weapon fire or high-G maneuvers, they separate from the vehicle. See above.
4	**Jammed Forward:** The rotors are jammed forward. The aircraft automatically accelerates at its full rate each round until it reaches its top speed. All *flyin'* rolls suffer a -4 penalty.
5-6	**Lost Collective:** The aircraft may no longer perform power climbs.
7	**Lucky!** No additional effect
8	**Lost Cyclic:** The aircraft's Acceleration rating drops by 5 mph. This effect is cumulative if it occurs more than once.

9-10	**Jammed to the Side:** The rotors are jammed to one side. Determine which randomly. The aircraft automatically performs a sideslip to this side each phase.
11	**Vibration:** The rotors have been damaged and are vibrating badly. Roll 1d6 each phase. On a 6, the rotors come off as described in **Going Down?** above.
12	**Look Out!** The rotors warp under the blow and cut through the passenger compartment. Roll 1d6 for each passenger. On a 5 or 6, the poor sap gets whacked by a blade for 4d20 damage. The rotors then leave the aircraft. See **Going Down?** above.

Steering Jet Criticals

Roll	Effect
2	**Corkscrew:** Thrust vectored in opposite directions throws the craft into a spin. Its forward movement slows by 20 mph per phase and it spins to face a random direction each phase (roll 1d12 to determine). Ending the spin requires an Incredible (11) *flyin'* roll.
3	**Inverted:** The aircraft flips upside down. Anyone not strapped in must make a Hard (9) *Strength* roll each action *to hold on* or be thrown out or bounced around inside for 3d6 massive damage. The craft drops 1d6" of altitude each phase. Righting the vehicle requires a Hard (9) *flyin'* roll.
4	**Jammed Forward:** The aircraft decelerates by the vehicle's full Acceleration rating each phase. Once the speed hits zero, the craft begins to accelerate in reverse.
5-6	**Sloppy:** The controls are sluggish. All *flyin'* rolls are made at -2.
7	**Lucky!** No additional effect.
8-9	**Jammed to the Side:** The aircraft automatically performs a sideslip maneuver each phase.
10	**Barrel Roll:** The aircraft performs a barrel roll on its next movement phase.
11	**Power Dive:** The aircraft noses over into a vertical dive on its next movement phase and must use all of its movement to dive.
12	**Tumble:** The aircraft tumbles across the sky. Its speed drops by 2d6 times 5 mph. All passengers must make a Hard (9) *Vigor* roll to avoid blacking out. The tumble ends after one phase.

Tail Criticals

Roll	Effect
2	**Spin:** The aircraft loses speed in the amount of 2d6 times 5 mph each phase and goes into a spin. Recovering from the spin requires a Hard (9) *flyin'* roll.
3-4	**Elevator Jammed:** The elevator jams, throwing the aircraft into a random maneuver. Roll 1d4: 1-Climb, 2-Dive, 3-Vertical Climb, 4-Vertical Dive. The aircraft performs this maneuver each phase until the elevator becomes unstuck. Roll 1d6 each phase. On a 6, the elevator pops loose.
5-6	**Jammed Rudder:** The rudder jams, causing the aircraft to perform a sideslip maneuver each round. Determine the direction randomly. Roll 1d6 each phase. On a 6, the rudder pops loose.
7	**Lucky!** No additional effect.
8-9	**Loose Elevator:** Roll 1d6 each phase. On an even result the aircraft gains 1d4" of altitude and suffers 1d4 Drag. On an odd result it loses a like amount.
10-11	**Loose Rudder:** Roll 1d6 each phase. On an even result the aircraft slides 1d4" to the right. On an odd result it slides a like amount to the left. Either result causes 1 point of Drag.
12	**No Rudder:** All *flyin'* rolls suffer a -6 penalty. The aircraft may not perform sideslip maneuvers.

Tail Rotor Criticals

Roll	Effect
2	**Whirlin' Dervish:** The tail rotor comes off and the aircraft begins spinning uncontrollably. The vehicle loses 2d6 times 5 mph of speed each phase. All occupants must make a Hard (9) *Vigor* roll each round or take the difference in Wind.
3-5	**Minor Damage:** All *flyin'* rolls suffer a -2 penalty.
6-8	**Lucky!** No additional effect.
9-11	**Major Damage:** All *flyin'* rolls suffer a -4 penalty.
12	**Whirlin' Dervish:** This is the same as 2 above.

Weapon Criticals

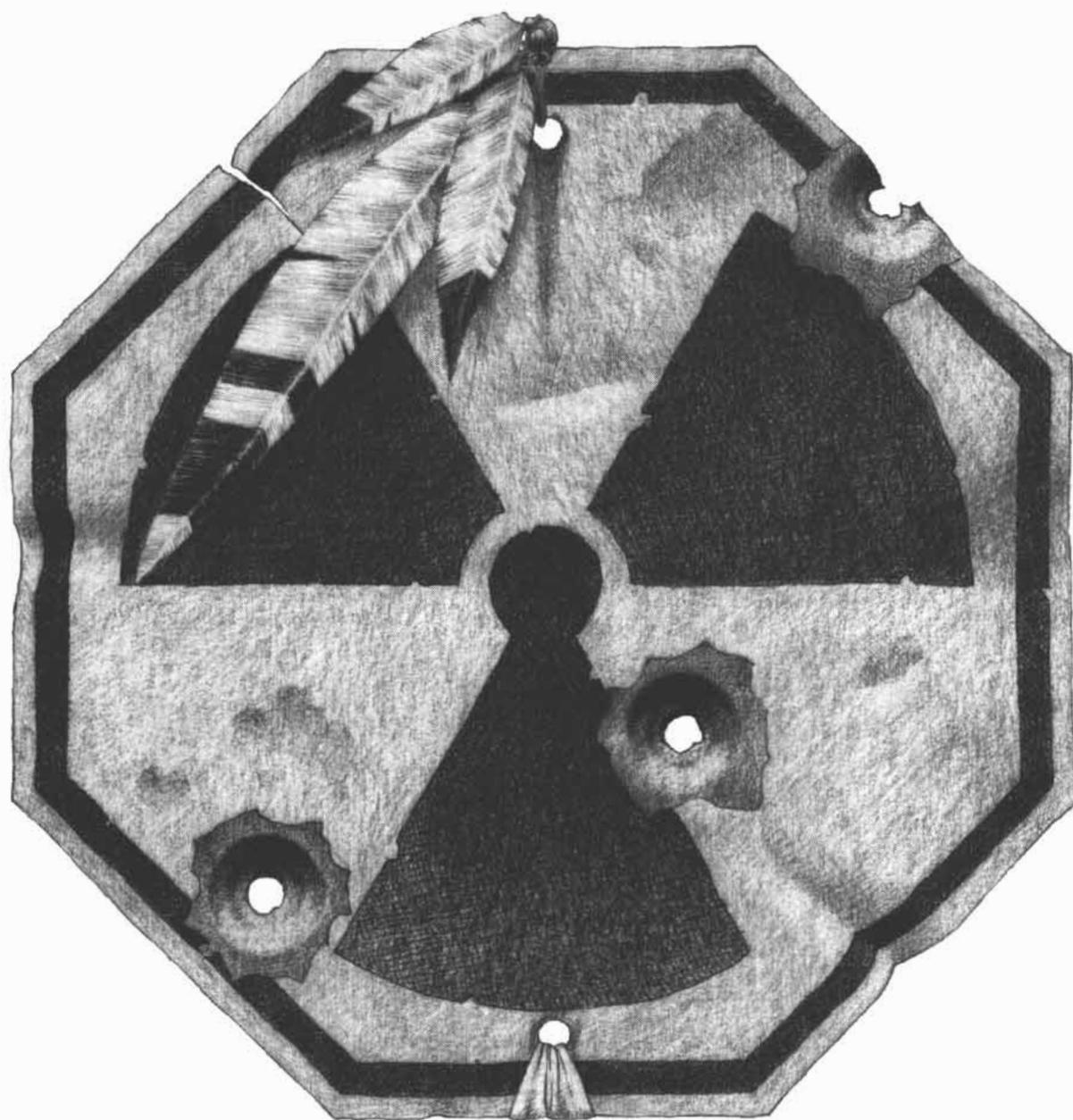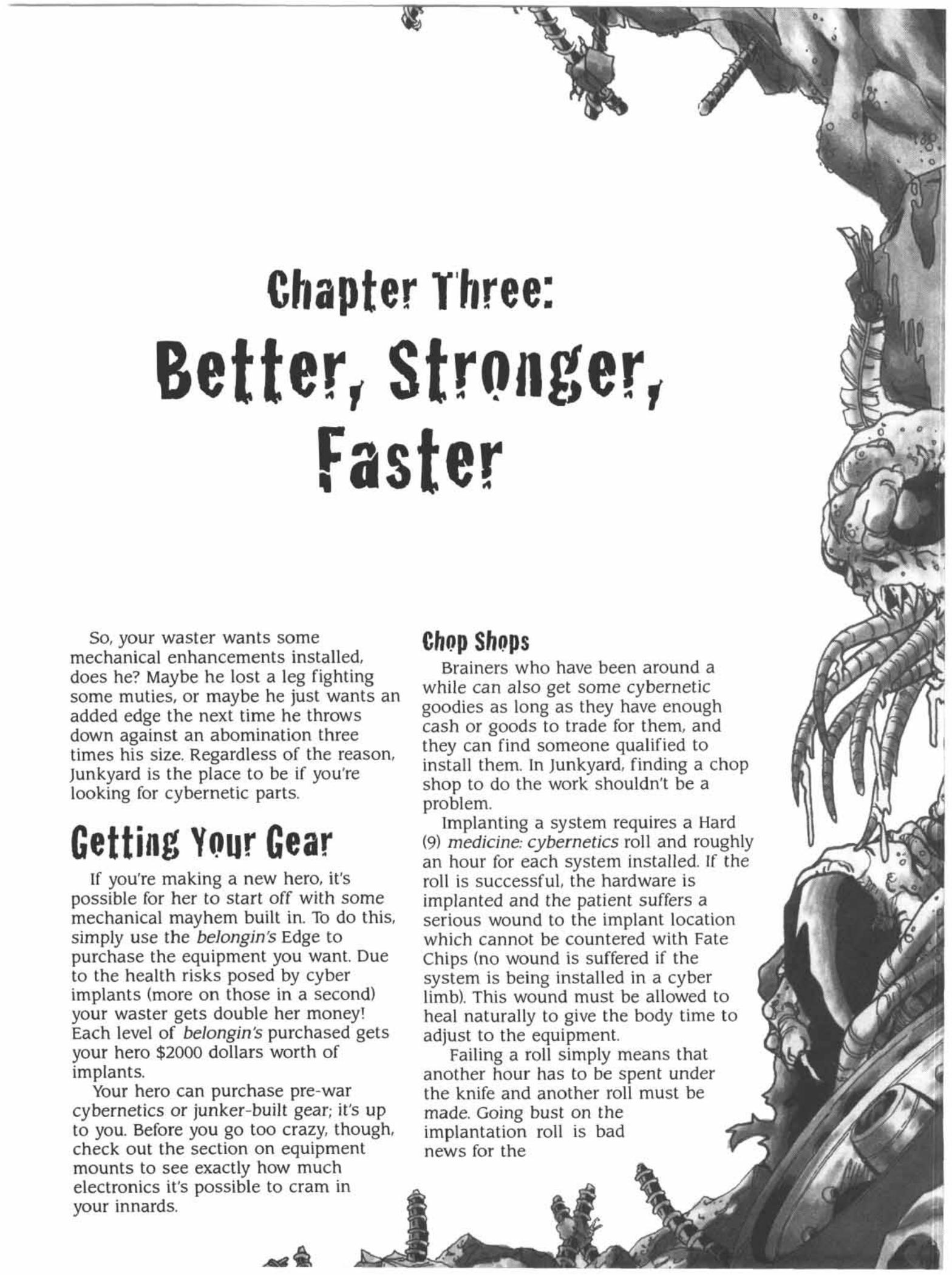| Roll	Effect
2	**Ammo Ignited:** The impact sets off some of the weapon's ammunition. The vehicle takes damage as if hit by a single round from the weapon. The weapon itself is destroyed.
3	**Ammo Destroyed:** All ammunition remaining in the weapon is lost. For single-shot weapons like missiles, the weapon is destroyed.
4	**Ammo Damaged:** The weapons loses 50% of its remaining ammunition. If the weapon is magazine-fed, the magazine continues to function for the remainder of the battle but must be discarded afterward.
5	**Mount Loosened:** The weapon mount is coming loose. The shaking caused by this imposes a -4 penalty to all *shootin'* rolls made for this weapon. If externally-mounted, roll 1d6 each time the aircraft performs a high-G maneuver. On a 5 or 6, the weapon tears free from the vehicle.
6	**Mount Warped:** The weapon's mount has been bent, making it more difficult to aim. All *shootin'* rolls made for this weapon suffer a -2 modifier. Check to see if the weapon comes off under high Gs as above, but it only comes loose on a result of 6.
7	**Lucky!** No additional effect.
8	**Jammed:** The shock of the impact has caused the weapon's firing mechanism to jam. A Fair (5) *tinkerin'* or *trade: weaponsmith* roll can fix the problem (provided the mechanic can reach the weapons).
9	**Mount Stuck:** The linkage or mounting pin has been bent. The weapon can no longer be moved. It's stuck in the position it was last fired. Missiles and bombs are jammed and won't release from the aircraft.
10	**Whoa, Nelly!** The weapon's firing mechanism is activated by the impact and it begins firing. If the weapon is capable of automatic fire, it fires at its full ROF each phase.
11	**Weapon Lost:** The weapon is blown free from the vehicle.
12	**Insult to Injury:** The weapon tears free from the vehicle, taking a portion with it. The aircraft takes an additional 1d4 damage.

Wing Criticals

Roll	Effect
2	**Snap!** The wing separates from the aircraft, sending it into a spin from which there is no recovery. Hope your brainer brought a parachute along.
3	**Creak!** There's not much holding the wing onto the plane. If the wing takes any additional damage, either from weapons fire or a high-G maneuver, it comes off. See **Snap!** above.
4	**Didn't Need That Anyway:** A portion of the damaged wing falls off the aircraft. Add +2 to the drag roll for all maneuvers.
5	**Flaps Damaged:** The aircraft's flaps have been damaged. This increases the TN of all *flyin'* rolls made to land the vehicle.
6	**Ailerons Jammed:** The aircraft performs a bank maneuver each phase. Roll a die: even, it banks right; odd, it banks left.
7	**Lucky!** No additional effect
8-9	**Bent:** The wing has been bent. Lower the aircraft's handling by -2.
10	**Swiss Cheese:** The wing and control surface are full of holes. Reduce the aircraft's Handling by -4.
11	**Dangling:** A piece of wing has come off and is spinning in the breeze. Increase the Drag rating of all maneuvers by +1.
12	**Pop! Sproing!** Your brainer is literally flying on a wing and a prayer. Roll 1d6 at the beginning of each round. On a 6, the wing comes off. See **Snap!** above.

Vehicle:

Air Speed	
5	0.5
10	1
15	1.5	0
20	2
25	2.5

30	3	
35	3.5	
40	4	+1
45	4.5	
50	5	

55	5.5	
60	6	
65	6.5	+2
70	7	
75	7.5	

80	8	
85	8.5	
90	9	+3
95	9.5	
100	10	

105	10.5	
110	11	
115	11.5	+4
120	12	
125	12.5	

130	13	
135	13.5	
140	14	+5
145	14.5	
150	15	

155	15.5	
160	16	
165	16.5	+6
170	17	
175	17.5	

180	18	
185	18.5	
190	19	+7
195	19.5	
200	20	

| N/A |

Owner:

Vehicle Type:

Acceleration Rating

Handling

Passengers :

Top Speed

MPG

Engine

Gas Tank Size **Handling** **Size**

Stall Speed **Armor Value** **Load Limit**

Damage

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

Special Equipment	Equipment Type	Slots
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Weapon	Mount	Arc	Shots	Speed	Rof	Range	Damage
____	____	___	____	____	___	____	____
____	____	___	____	____	___	____	____
____	____	___	____	____	___	____	____
____	____	___	____	____	___	____	____
____	____	___	____	____	___	____	____

Durability Steps

○1
○2
○3
○4
○5

Altimeter		
Hundreds	Tens	Ones
0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9

No Man's Land

Chapter Three:
Better, Stronger, Faster

So, your waster wants some mechanical enhancements installed, does he? Maybe he lost a leg fighting some muties, or maybe he just wants an added edge the next time he throws down against an abomination three times his size. Regardless of the reason, Junkyard is the place to be if you're looking for cybernetic parts.

Getting Your Gear

If you're making a new hero, it's possible for her to start off with some mechanical mayhem built in. To do this, simply use the *belongin's* Edge to purchase the equipment you want. Due to the health risks posed by cyber implants (more on those in a second) your waster gets double her money! Each level of *belongin's* purchased gets your hero $2000 dollars worth of implants.

Your hero can purchase pre-war cybernetics or junker-built gear; it's up to you. Before you go too crazy, though, check out the section on equipment mounts to see exactly how much electronics it's possible to cram in your innards.

Chop Shops

Brainers who have been around a while can also get some cybernetic goodies as long as they have enough cash or goods to trade for them, and they can find someone qualified to install them. In Junkyard, finding a chop shop to do the work shouldn't be a problem.

Implanting a system requires a Hard (9) *medicine: cybernetics* roll and roughly an hour for each system installed. If the roll is successful, the hardware is implanted and the patient suffers a serious wound to the implant location which cannot be countered with Fate Chips (no wound is suffered if the system is being installed in a cyber limb). This wound must be allowed to heal naturally to give the body time to adjust to the equipment.

Failing a roll simply means that another hour has to be spent under the knife and another roll must be made. Going bust on the implantation roll is bad news for the

Cyber Mounts

Location	Natural	Prewar	Junker
Head	2	–	–
Torso	4	–	–
Arm	2	4	8
Leg	2	6	8

patient. He suffers 4d10 damage to the implant location which cannot be countered with Fate Chips. To add insult to injury (literally), the cyber system may be damaged in the attempt. Roll a die. On an odd result, the equipment being installed was destroyed by the botched surgery.

Mounts

There is only so much equipment even the best surgeon can squeeze inside a living body. Unlike implanting cyberware in deaders, the doctor has to watch out for things like arteries, nerves, and major organs if he doesn't want to kill or cripple his patient.

Each part of a living body can only hold so much equipment without impairing the user. In game terms we represent this by assigning a number of mounts to each location. Every piece of equipment requires a certain number of mounts and once the mounts in a location are filled, no more hardware can be installed there.

The number of mounts available in each location is summarized in the Cyber Mounts Table. The natural column lists the mounts available in a normal human body. The columns under Prewar and Junker are the number of mounts available if the location has been replaced with a cybernetic replacement. Junker limbs tend to be slightly oversized, so they can hold more equipment than prewar ones. If a location lists a dash, that means that the location cannot be replaced with a cyber equivalent.

Prewar or Junker?

When buying equipment, your brainer must choose between buying cybernetics manufactured prior to the Last War or purchasing equipment which has been manufactured by a junker. Each type of equipment has its pros and cons.

Prewar cyberware was developed from technologies pioneered by the military for their cyborgs. This technology was used by the medical community primarily to help those who had lost limbs or organs. There was some development of weapons and other specialized systems for living people—especially in Junkyard where blood sports were still popular—but this field remained only a small portion of the cyberware market. What this means for your waster is that there are plenty of prewar cyber limbs and organs to be had, but precious few things like weapons and armor.

Since the stuff is no longer being manufactured, prewar hardware is more expensive, but it has the advantage of not suffering instability like junker systems. Most prewar equipment was also built to be undetectable by the naked eye, so it's preferred by those who don't want others to know they have been implanted.

Junker-built cyberware tends to be klunky-looking and slightly oversized. It's obvious to anyone who cares to look that your brainer has had some work done. If your hero doesn't give a wormling's butt about who knows, or he's on a budget, the cheaper, oversized, junker limbs can actually hold more equipment internally than the anatomically-correct prewar ones.

Power

The other major difference between the two hardware types is how they get their power. Prewar systems run off of a battery pack which also must be installed in the patient. Most packs held up to four batteries which were each good for about a month of power under normal conditions. Under strenuous conditions they can run out of juice much more quickly. However, when they do run out, the batteries can be

recharged by plugging them into a 220-volt outlet. Before the war, this wasn't a problem, but finding electricity outside of Junkyard these days can often be tricky.

Junker equipment has two primary options for power: spirit batteries or a soul tap. Spirit batteries work for systems which have a periodic Drain like weapons or shields, but they quickly run out of power when connected to systems that have a constant Drain, like cyber limbs. For these systems, the only feasible power source is a soul tap.

The soul tap works like a cyborg's spirit fetter, only instead of sucking a manitou dry, the device siphons off part of the user's life force to power his systems. As you might expect, this can be dangerous.

There is one last power option for junker equipment if your brainer is willing to pay through the nose. For an increase in price (usually triple the normal price or more, the exact cost is up to your Marshal), it's possible to have a junker custom build a piece with an oversized tech spirit in it. This spirit can provide Drain for the equipment it inhabits and any other cyberware linked to it. The downside to this is that the equipment generally has a lower Stability than normal. You can find all the details on this in *The Junkman Cometh*.

Cyborg Equipment

It is also possible for living humans to use certain cyborg systems. There are a couple of restrictions on this. First, breathers can only mount modular cyborg systems (integral systems are much too invasive), and they must be installed inside a cyber limb—systems designed for the Harrowed are simply too different to be installed directly into living flesh, not to mention that they haven't been treated to prevent rejection (or infection).

Second, your hero must have a G-ray power source for the system. This can be a spirit battery, a soul tap, or a tech spirit.

Check out the *Cyborgs* book for a list of all the systems that your hero can purchase.

Mixing and Matching

There's no reason your hero can't mix and match various types of equipment. Your brainer could buy a prewar cyber arm powered by a battery pack, and then install a cyborg hold-out weapon in it powered by a spirit battery.

Spirit Loss

There's a price to be paid for the power granted by cyberware. The more a person's body is replaced by hardware, the weaker his soul becomes. This is caused by the gradual erosion of the person's sense of identity as a human being. Many heavily-enhanced wasters eventually become little more than soulless shells.

Recording Equipment

As you buy hardware for your hero you should record it on the Scrapper Record Sheet provided on page 120. In each hit location are numbered lines which represent the mounts available in each area. In the limb locations, there are three columns of numbers and the mounts are divided by lines. From left to right, the numbered columns represent the possible mounts for a natural limb, a prewar limb, and a junker limb respectively.

Each system you buy (other than limbs) should be recorded on a number of lines equal to its mount requirements. A piece of hardware which required two mounts, for instance, would be recorded on the first two available lines in the hit location in which it was installed.

Scrap Metal

Damage to scrappers works a little differently because of all the hardware they've got crammed inside them—not to mention the fact that entire portions of their bodies have been replaced with cybernetics.

The number of wounds caused by an attack are still calculated and applied normally. Cybernetic body parts take damage just like normal body parts—although they're usually a lot tougher. Once a cybernetic body part has become maimed, it ceases to work (or falls off, this is the Marshal's call and depends on the nature of the attack).

Whenever a scrapper suffers wounds to an area, there is a chance that one of the systems in that location may be damaged. Roll 1d6 and compare it to the number of wounds inflicted by the attack. If the die result is less than or equal to the number of wounds caused to the location, a random system in that area has been damaged in addition to the wounds suffered.

To find out which system was hit, roll a die of a type equal to the number of available mounts in the damaged location (or a d4 for two-mount locations). Compare the results to the mount listings. If a system is listed on the line rolled, that device has been damaged. If the line is empty, no system was actually damaged.

In game terms, this means that as a hero cybers up his *Spirit* stat drops. Each cyber system has a *Spirit* listing, this is the number of *Spirit* dice that your hero loses when that system is implanted. The larger and more invasive a system is, or the more of your hero's body it replaces, the more of your brainer's identity it saps.

This works a little differently then most Attribute modifiers. Rather than dropping in complete die steps, your hero's *Spirit* loses individual dice. Once your brainer's *Spirit* is reduced to zero dice, it drops to the next lower die type with a Coordination equal to its original Coordination. For instance a 2d12 *Spirit* that lost 4 dice would go 2d12, 1d12, 2d10, 1d10, 2d8. A 3d12 *Spirit* losing the same number of dice would go 3d12, 2d12, 1d12, 3d10, 2d10.

Once you've determined which system has been damaged, roll another d6 and add the number of wounds caused by the attack. On a result of 1 to 5, the system has been disabled for that many rounds. On a 6 or higher, the system has actually been knocked out, it must be replaced or repaired.

Bob's scrapper takes a serious wound to his arm which has an adrenal booster implanted in it. He rolls 1d6 and gets a 2. Since this is less than the number of wound levels inflicted by the attack (3), the system has potentially been damaged. His arm has 2 mounts, of which, one is filled by the adrenal booster. He rolls 1d4 to determine what was damaged. He gets a 2, indicating his adrenal booster has been hit. If Bob had rolled a 3 or 4, he would have gotten off scot free because the other mount is empty. Next he rolls another 1d6 to see how bad it is. He gets another 2 and adds 3 for the number of wounds caused by the attack. The total of 5 means his adrenal booster is knocked out for 5 rounds.

Rejection

Unlike deaders, whose immune systems have long since stopped working, living humans have to worry about their bodies rejecting all the metal and silicon that's been crammed inside them.

Whenever a scrapper takes a wound to a portion of her natural body which has cyberware installed in it, or to which a cyber limb is attached, she must check for rejection. This is done when the first healing roll is made for the wound, whether due to natural or magical healing. The more severe the trauma, the more likely it is that the scrapper's immune system will fire up and try to get rid of the foreign objects in her body.

Roll 1d6 versus the number of wound levels suffered to the body location. If the roll is greater than or equal to the

number of wounds inflicted, she's okay. If the roll is less than the wound level, rejection has set in.

Rejection has the following effects:

All systems in the affected location stop working. If the torso is affected, all cyber limbs attached to it also cease functioning.

The scrapper must make a Hard (9) *Vigor* roll each day or suffer a wound in the affected location. This wound cannot be negated by Fate Chips, but chips can be spent on the roll as normal.

Rejection continues until two days have passed without the scrapper suffering a wound.

Immunatol

Prior to the Last War, rejection wasn't a serious problem because all implant patients took a drug called Immunatol which suppressed their bodies' immune systems. Any sicknesses or infections caused by the drug were simply treated with antibiotics.

Many scrappers still take this drug, but it's a little more risky because access to antibiotics isn't what it used to be. Taking Immunatol allows the brainer to add +2 to all rejection related rolls, but imposes a -4 penalty on all *Vigor* rolls made to resist infection or disease.

Most junkers who deal in cyberware know how to make this drug and sell it to their customers. The going price in Junkyard for a dose of Immunatol is $50. The effects of a dose last for one week.

Bob takes a critical wound (4 wound levels) to his torso. He rolls 1d6 to check for rejection and rolls a 1. He adds +2 because he has been taking Immunatol, but a 3 is still lower than the wound level, so rejection occurs. The systems in his torso and his cyber arm stop working. Because of the Immunatol, though, he can add +2 to his *Vigor* roll to resist taking a wound.

Instability

One of the major disadvantages to junker-built cyberware is that it suffers from periodic instability like all other junker tech. Heroes with junker-built hardware in them must check for instability once per day.

To do this, roll 1d20 versus the Stability Rating of the scrapper's equipment. If the roll is higher than the systems' Stability, instability has occurred. Roll 1d20 plus the amount by which the roll was missed on the Instability Table in *The Junkman Cometh* to find out the results. If you don't have that fine book (and why not?) roll on the Cyber Instability Table we have thoughtfully provided. Apply the result to one randomly selected junker-built system in your hero's body.

A roll of a natural 20 always causes instability regardless of the hardware's Stability Rating, but Stabilities of greater than 20 subtract from the roll on the instability table by an amount equal to that which they exceed 20. A Stability of 24, for instance, subtracts 4 from the roll on the Instability Table.

If your hero's cyberware was built by a junker in the posse, determine its Stability using the normal construction rules in *The Junkman Cometh*. Your Marshal has rules for determining the Stability of equipment purchased from extras. All junker-built cyberware in a person is considered an integrated system, so you only need to check once a day for all such equipment. However, because of this, the Stability of all the equipment is only as high as the piece of hardware with the lowest Stability. It's usually a good idea to shell out for better quality goods.

Christy's cyberware has a Stability of 18. She rolls 1d20 and gets a 19—her systems are unstable. She missed the roll by 1, so she adds +1 to her 1d20 roll on the Instability Table.

Power Management

So, how much power does your scrapper have for his cyberware? Let's take a look and find out. As with hardware, it's possible for your hero to mix and match these power sources as long as he has enough money and enough room to mount them.

Battery Packs

Battery packs are cutting-edge power sources with extremely high energy densities developed specifically for powering cyberware—don't try sticking an ordinary 9-volt battery in your scrapper's arm. A single battery pack has 120 system-days worth of power in it. To see how long the pack lasts, simply divide 120 by the number of systems it needs to power (even if they don't run continuously), and round down. A pack attached to three systems, for example, would last 40 days, while a battery pack hooked to 6 systems would last only 20. This endurance may be reduced due to system overloads, however.

There is a column along the right side of the Scrapper Record Sheet to track the level of power in your hero's battery in 30-day increments. If your hero has more than one battery pack, simply use different colored paper clips for each battery.

A battery pack can be recharged by plugging it into a standard 220-volt electrical outlet for 48 hours (provided the outlet has power, of course).

Spirit Batteries

Junker devices and cyborg systems can draw power from spirit batteries. These can be installed inside equipment or in the scrapper himself at the usual slot costs (see *The Junkman Cometh*). Once drained, they can only be recharged by a junker. This involves removing the battery, so it's a good idea to install it in a cyber limb where it won't require surgery to get at it.

Spirit batteries aren't suitable power sources for hardware with a constant Drain like cyber limbs because they quickly run out of energy—a little something extra is required.

Soul Taps

A soul tap siphons life energy from your scrapper's very soul. Although efficient, it can have dangerous consequences for your hero. A soul tap provides Drain equal to your hero's *Spirit* die type each round.

The Scrapper Record Sheet has a space provided along the bottom of the sheet to keep track of how much energy your waster has available to her. Figure out the Drain of the systems your hero leaves running at all times and place a paper clip on the Drain Track to show this. These are usually systems like cyber limbs, eyeballs, and the like. In an emergency, your hero can shut some of these systems down to get more energy, but she obviously won't get any of their benefits while they're deactivated.

The Drain above this paper clip, up to your brainer's *Spirit* die, is how much of a surplus your hero has available for other things like powering weapons, overloading systems, and so on. You can use more than this amount, but this is considered an Overload. See page 106 for the risks involved. As your scrapper spends this surplus energy, use a second paper clip to keep track. This surplus energy is refreshed each round.

Tech Spirits

Junkers can install an overly large tech spirit into a piece of equipment to provide extra Drain. This lowers the device's Reliability. The availability and cost for these types of devices are up to your Marshal

Power Control

Turning systems on and off requires only a mental command. This is considered a simple action. Your deader can turn one system on or off on each of her actions with no penalty. Flipping the switch on more than one system at a time takes a little more concentration and takes a full action.

The extra Drain made available by shutting down a system is not gained until the beginning of the following round—the energy for the system has already been used for the current round.

Cyber Instability

Roll	Effect
1-2	**No Effect!** Your scrapper gets off lucky this time.
3-4	**Momentary Outage!** The affected system is temporarily knocked out for 1d6 rounds
5-6	**Major Slippage.** The tech spirit's grip on the device loosens. The affected system's Stability rating drops by 1.
7-8	**Woohoo!** The affected system is knocked out for 1d6 minutes, but after recovering, its Stability actually increases by +1 as the tech spirit settles in more securely.
9-10	**Energy Leak.** The device springs a leak. Its Drain is increased by 1. In addition, each time the system is used, everyone within 10 yards must make a Fair (5) *Vigor* roll or gain a random mutation. This roll must be made every hour for systems which are in constant use like a cyber arm.
11-12	**Extreme Slippage** The system stops working for 1d6 days.
13-14	**Warped.** The systems will never be quite the same. It conks out for 1d6 rounds. Once it recovers, its Stability is reduced by a whopping 1d8 points.
15-16	**Dustbin** The system gives up the ghost—literally. It ceases to work and crumbles into its individual components. Half of the components can be used to rebuild the device or recycled into something new—after being retrieved from inside the scrapper's body with an Onerous (7) *medicine: surgery* or *medicine: cybernetics* roll.
17-18	**Poof!** The tech spirit in the system returns to the Hunting Grounds and takes the cyberware with it. The system is gone for good.
19	**Feedback.** The unstable system pulses energy back into your scrapper's body. He takes 4d10 damage to the affected location.
20+	**Kaboom!** The tech spirit inside the system doesn't survive its removal from the equipment. Its death liberates a blast of energy that causes the system to explode in a spectacular shower of debris. The device causes 1d20 damage for every point of Drain it requires. This blast has a burst radius of 10 yards.

Overloads

We have one last thing to discuss before we get to all the cyber goodies: overloads. An overload can happen in two ways. Some systems, especially many cyborg combat systems, are designed to have extra juice pumped through them to create effects beyond what the system is normally capable of. Doing this is considered an overload. Just because the system was designed for this doesn't mean it's entirely safe, however. There's still a chance that uncontrolled power surges can damage the cyber equipment, the scrapper, or both.

The second way in which an overload can occur is when a scrapper tries to spend more power than he's actually got. This can only be done with power from a soul tap or tech spirit; depleted battery packs and spirit batteries have no more left to give.

When either one of these events occurs, roll 1d20 on the Scrapper Overload Table. Add +1 to the roll for every point of Drain being spent over the system's normal requirements, or the amount by which the Drain exceeds the soul tap's or tech spirit's maximum Drain, or both if that's the case. Overloaded tech spirits must always make a Stability roll.

> Katarina's Templar is trapped in the wreckage of the posse's car and there's an APC full of Black Hats bearing down on the group. Bob decides to overload his adrenal booster and crank up his *Strength* so he can rip the door off and save her. He overloads his adrenal booster with two points of energy from his soul tap, but because he's already used all of his soul tap's available energy for this round, this also overloads it by two points. He must roll on the Scrapper Overload Table at +4.

The Systems

Okay, we've reached the good stuff. Before you start shopping, let's quickly go over what the common characteristics of each system mean:

Cost is how much the system is worth in barter. It's also used when purchasing equipment for a new character. Many systems have two costs listed. The first cost is for a prewar version of the equipment, the second is for a junker-built version.

Type designates whether the device is an integral or modular system. Integral systems require radical surgery to implant. In game terms, if your hero has an integral system, he's stuck with it unless he can find a qualified cyber-surgeon or junker who can remove it. Modular systems were built to be removable and can be popped in and out of a cyber limb with a Fair (5) *tinkerin'* roll and 15 minutes of work. Modular systems implanted in the torso, head, or natural limb must be removed surgically.

As we mentioned earlier, *Spirit Loss* is the number of *Spirit* dice your hero loses due to the implantation of the system. Not all systems cause *Spirit* loss, only those that require the surgeon to hack off a big chunk of your scrapper's body or which take over certain vital body functions.

Mounts is the number of mounting locations the system uses up inside your scrapper's body. Your hero must have this number of mounts available in the location for the system to be successfully installed.

Drain is the amount of energy the system requires while activated. Two numbers are listed for Drain. The first is for battery-operated systems. It represents how many systems the device counts as when figuring battery life. Some systems are such energy hogs they count as two or more systems. The second number is for G-ray-powered devices. Unless it says otherwise, this amount of Drain is required every round that the device is powered up.

Mounting location lists the body area in which the system must be mounted. Not all systems have a required mounting location.

Lastly, some systems also have an *overload* section at the end of their description. The performance of these systems can be increased or altered by pumping extra energy into them at the risk of damaging the equipment. When overloading battery-powered systems, each point of overload burns one day's worth of energy off the battery.

Adrenal Booster

Cost: $2000 ($1000)/location
Type: Integral
Spirit Loss: 1
Mounts: 1/location
Drain: 1 (2)
Mount Location: Any

This system uses a combination of electric shocks to the muscles, stimulation of the adrenal glands, and the release of endorphins into the bloodstream to pump up the user's *Strength*. It can make an average person strong and turn a bruiser into Hercules.

This system must be implanted in each of the scrapper's natural body parts with the exception of the head (although if your brainer wants to headbutt or bite people with incredible strength he can have it installed there). When activated, it increases the user's *Strength* die type by two steps. The adrenal booster has no effect on the Strength die type of cyber limbs.

Being hyped up like this is taxing on the hero's system. Each round that the adrenal booster is active, the scrapper suffers a point of Wind damage.

Overload: Each point of energy spent to overload this system increases the user's *Strength* die by an additional step. Taking the system up this high is extremely hard on the scrapper's body. He takes 2 Wind every *action* that the system is overloaded. Once the overload ends he immediately takes 1d6 massive damage for every point spent on the overload from ripped muscles and torn tendons.

If the scrapper overloads the system by 4 points or more, he risks exploding his heart with the strain. Each action that the system is powered to this level, he must make a Hard (9) *Vigor* roll or have a heart attack. Use the rules on the Scart Table in the *Hell on Earth* rulebook to resolve this.

Scrapper Overload

Roll	Effect
1-10	**No Effect**
11-12	**Winded:** Some of the excess energy leaks into the scrapper's body, causing a number of Wind equal to the excess Drain.
13-14	**Zap:** The scrapper is zapped with some of the energy. He must make a *Vigor* roll against a TN of 3 plus the excess Drain or be stunned.
15-16	**Short:** The overloaded system conks out for 1d6 rounds. If the soul tap, battery pack, or tech spirit was overloaded, it provides no power for this amount of time.
17-18	**Slow Burn:** Some of the energy bleeds into the scrapper's body. The hero takes 1d6 damage to the guts for each point of Drain used in the overload.
19-20	**Snap, Crackle, Pop:** The overloaded system breaks. If the soul tap, battery pack, or tech spirit was overloaded, it provides no power for 1d20 minutes.
21-22	**Strained:** The overload affects the power supply. If the soul tap was used, the scrapper's *Spirit* die type drops by one step for 1d8 days. Tech spirits produce no power for a like amount of time. A battery pack loses 2d6 days of energy.
23-24	**Wham:** The overloaded system explodes doing 1d8 damage to the scrapper for each point of Drain used in the overload. If the soul tap was overloaded, the scrapper's *Spirit* die type drops by two steps for 2d6 days. Tech spirits produce no energy for a like amount of time. A battery pack loses 3d6 days of energy.
25-26	**Drained:** The strain was too much for the power supply. If using a soul tap, the scrapper's *Spirit* die type is permanently reduced one step. A tech spirit must make an immediate roll on the Instability Table at +6. An overloaded battery pack loses all energy and can never be recharged.
27-28+	**Soul Blast:** Feedback from the overloaded system surges through the scrapper's soul tap. The brainer must make an Incredible (11) *Spirit* roll or die as his soul is ripped to shreds. Anyone who dies in this manner cannot return as a Harrowed. If the hero doesn't have a soul tap, treat this as **Drained.**

Antenna

Cost: $5000 ($2000)
Type: Modular
Spirit Loss: None
Mounts: 1
Drain: 1 (1 (2 with low-light vision))
Mount Location: Head

This system implants a thin, telescopic, fiber-optic antenna in the scrapper's head. The antenna is wired into the his optic nerves, allowing the hero to see through the antenna. The visual feed from the antenna normally appears as a small picture in one corner of the brainer's vision, but it can be expanded to a full screen view when desired.

When activated, the antenna can be extended up to three feet. The antenna is flexible and can be maneuvered to look around corners, under doors, in pipes, and so on. Activating or retracting the antenna is a simple action.

The basic system gives the equivalent of normal vision. Low-light capability can be added to the system for an additional $1000.

Balance Booster

Cost: $8000 ($6000)
Type: Integral
Spirit Loss: None
Mounts: 2
Drain: 1 (2)
Mount Location: Torso

A balance system implants small gyroscopes in locations throughout a scrapper's torso. These systems are favorites of scrapper gladiators who've loaded themselves down with armor. They are linked to a central processor that helps the waster maintain an even keel. This increases the user's *Nimbleness* die type by 2 levels.

Overload: Pumping extra juice into this system overclocks the central processor and decreases response time. Each 2 points spent to overload the balance booster increases the scrapper's *Nimbleness* die type by +1 level.

Battery Pack

Cost: $4000
Type: Modular
Spirit Loss: None
Mounts: 1
Drain: None
Mount Location: Any

This is the battery pack needed to power all prewar systems. The procedure for calculating the life of a pack is detailed on page 104. A scrapper may have multiple battery packs.

To track the energy level in a battery with over 30 days of power, use two paper clips: one to mark the number of 30 day increments left, and the other to mark the remainder. A battery with 96 days of power, for instance, would have a clip on 3 (3 x 30 = 90) and a clip on 6.

Big Ears

Cost: $3000 ($1000)
Type: Integral
Spirit Loss: None
Mounts: 1
Drain: 1 (1)
Mount Location: Head

It's hard to talk about someone behind his back when he's equipped with one of these units. A big ears unit adds retractable baffles behind the scrapper's ears and links them to a processor which filters and analyzes all incoming sound.

The unit can be used with the baffles retracted or deployed. With the baffles retracted, the unit gives the hero a +2 bonus to all *Cognition* checks made in situations in which hearing is a factor. With the baffles open, the bonus increases to +4, but your hero is going to attract some stares.

In addition, your scrapper can focus the baffles into a parabolic mike. This allows him to hear any noise of whisper volume or higher out to about 200 yards directly in front of him. While doing this, the brainer suffers a -4 penalty to rolls made to notice noises behind him.

The baffles cannot normally be deployed if your scrapper is wearing a helmet. If your hero also has an expert system, he can record and save any sounds he hears. One slug of storage can hold about 2000 hours of high-quality sound recordings.

Claws

Cost: $2000 ($1000)
Type: Modular
Spirit Loss: None
Mounts: 1
Drain: 1 (1)
Mount Location: Arm or Leg

This system equips your hero with a set of retractable, razor-sharp claws. These claws are Speed 1, Defensive Bonus 0, and do *Strength*+1d6 damage. The special titanium alloy used in their construction keeps them sharp and gives them an AP 2 rating.

Cyber Arm

Cost: $3000 ($2000)
Type: Integral
Spirit Loss: 1
Mounts: None
Drain: 1 (1)
Mount Location: Arm (duh)

This system replaces a scrapper's arm with a cybernetic replacement. This replacement functions in much the same way as a normal arm. It has the same *Strength* and *Deftness* as the arm the brainer had before the implant surgery.

The arm is different in a couple of important ways, though. It has more room for additional internal systems. The exact number depends on whether you purchase a prewar or junker-built arm. It is also more resistant to damage. The materials used to make its outer shell are tough, giving it the equivalent of -4 light armor.

Prewar arms are indistinguishable from the real thing, provided you can find an arm that matches your hero's general build and skin tone (that's up to your Marshal). Anyone attempting to spot your scrapper's arm as artificial must make a *Cognition* roll against a TN of 13. The TN for this roll drops by +2 for every wound level the arm has suffered—it's hard to convince someone your arm is real when it's sparking and wires are falling out of it.

Junker arms tend to be somewhat oversized. Most junkers don't even bother trying to disguise their work as real arms. Scrappers with one of these arms are often mistaken for cyborgs when outside of Junkyard.

Cyber Eye

Cost: $3000 ($1500)/basic eye
Type: Modular
Spirit Loss: 1/eye
Mounts: 1/eye
Drain: 1 (1+1/function)/eye
Mount Location: Head

There are nearly as many types of cyber eyeballs as there are scrappers. Well, maybe not, but there are a lot of them.

Each eyeball can have two functions in addition to basic vision. Each added function increases the cost. The exact amount added depends on the function.

A scrapper equipped with an expert system, can record and save anything he sees through a cyber eye. One slug of storage can store roughly 500 hours of high-quality motion pictures.

to cause any damage. The laser has a variety of uses. It can be used as a pointing device, to measure ranges down to the nearest millimeter, or to guide smart weapons onto their targets. When used to guide weapons, the laser has a Speed of 1 and a Range Increment of 100 yards.

Light enhancement: This option increases the eye's light gathering capability. This allows the scrapper to see in darkened conditions and eliminates penalties due to low light conditions. It does not work in total darkness.

Spirit Vision: This function can see dimly into the spirit realm. It can see spirits, magical auras, and other things normally invisible to the naked eye. Check out the rules for drinking spook juice in *The Wasted West* for more details on what can be seen. This option takes up more room than the others and must be the only function installed in an eyeball.

Telescopic: This option allows your brainer to zoom in on the action at the blood sport arena. The most common telescopic eyeballs are 16x.

Thermal Imaging: This option sees objects by the infrared energy they give off. Hot objects are brighter than cold objects. Warm objects like running vehicles and human bodies have a halo of heat around them that makes it possible to spot them even when they are obscured by cover.

Wide Angle: The eyeball is equipped with extra light receptors that allow it to see a much wider arc than normal. The scrapper's peripheral vision is extended. He can see up to 30° behind him on either side and gets a +2 bonus to *Cognition* rolls made to avoid surprise.

As with cyber limbs, prewar eyeballs are indistinguishable from the real thing, while junker eyes tend to be obvious.

The possible functions are:

Electromagnetic: This option can see electromagnetic waves and magnetic fields. Objects giving off these types of energy glow brightly. This makes it possible for the scrapper to see power lines inside walls, follow radio waves back to their source, and locate utility lines before digging.

Holographic: The eyeball can actually serve as a holographic projector. It can project any image stored in your hero's expert system up to 10 yards away. The maximum image size is a cube roughly 6' on a side.

Laser Sight: The eyeball is equipped with a small but powerful laser generator. The beam isn't strong enough

Cyber Eyes

Option	Prewar	Junker
Electromagnetic	$2500	$1000
Holographic	$1500	$1000
Laser Sight	$2000	$500
Light Enhancement	$2000	$1000
Spirit Vision	$5000	$3000
Thermal Imaging	$2000	$1500
Telescopic	$1500	$500
Wide Angle	$3000	$1000

Cyber Hand

Cost: Varies
Type: Modular
Spirit Loss: 1 (only if attached to a living arm)
Mounts: 1
Drain: Varies
Mount Location: Arm

Rather than replacing an entire arm, some scrappers only have a hand replaced. Others replace the standard hand that is part of their cybernetic arms with special purpose hands.

There are a number of different hand types available:

Buzzsaw: This hand is about as subtle as a nuclear weapon, but it gets the job done. The deader's hand is replaced with a spinning saw blade. The blade has a Speed of 1, does Strength +2d10 damage, and has a DB of +1.

Grapple: These hands are popular with gladiators who compete in events with three-dimensional arenas. A grapple hand is detachable. It's mounted on the end of a small air cannon and attached to the arm by a thin alloy cable 100 yards long and capable of supporting 1000 pounds.

The hand has a Speed of 1, a Range Increment of 10 and does 2d6 damage when hitting a target. It can be fired at any location or target within 100 yards of the scrapper. If the shot misses, use the grenade deviation rules to determine where it lands.

Once fired, the hand can crawl on each of the brainer's actions with a Pace of 4 or it can latch onto something and be retrieved by the winch attached to the cable. The winch retrieves the hand at the rate of 10 yards per round.

Grip: Talk about your killer handshakes! The synthetic bones in this hand were designed to lock in place on command and are attached to heavy-duty servos. This increases the scrapper's effective *Strength* die type by two steps for the purposes of gripping things. In addition, your hero can spend an action locking the hand. Once locked, the hand can only be removed from the object it's gripping if your brainer let's go or the hand is destroyed.

Light Fingered: These hands have four times the normal number of sensors embedded in them. This gives the

scrapper a heightened sense of touch and imparts a +4 modifier to rolls to do anything which require precision and a light touch. Lockpicking, microsurgery, and Jenga are some examples.

Cyber Hands

Hand	Cost	Drain
Buzzsaw	NA/$2000	NA (2)
Grapple	$5000/$3000	1 (2 while winching)
Grip	$2500/$1500	1 (1)
Light Fingered	$5000/$3000	1 (1)

Cyber Leg

Cost: $4000 ($2500)
Type: Integral
Spirit Loss: 1
Mounts: None
Drain: 1 (1)
Mount Location: Leg

This system replaces one of the scrapper's legs with a spiffy titanium and ghost steel one. Just as with arms, the basic leg functions just like the limb it replaced. It has the same stats as your hero's old leg, provides light armor -4, and has more mount locations than a natural leg.

Overload: Normal cyber legs not equipped with high-speed pistons (see below) can be overloaded to increase the scrapper's Pace. Each extra point of Drain channeled into the legs increases your hero's Pace by 6.

There are a few options which can be built into a cyber leg. Each option uses up a mount in each leg. Powering these extra systems is not considered an overload. It's possible to have each of the following options built into the same legs:

High-Pressure Pistons: Legs with high-pressure pistons were designed for jumping and leaping. For each extra point of Drain channeled into the pistons, a scrapper with this option can jump 5' vertically, long jump 10' from a

standing start, and 30' horizontally from a running start. Two points of Drain, for instance, would allow a deader to jump 10 feet vertically or 20' horizontally. This option costs $1500 ($1000) per leg and must be installed in both legs (unless used for a killer game of hopscotch).

High-Speed Pistons: These legs were built for speed. Each extra point of Drain channeled into the legs increases the scrapper's Pace by 12. This option costs $2000 per leg and must be installed in both legs to function properly.

Rotating Knee: This option is only available in a junker version and costs $1000. This system was developed originally developed for Hans Gustavson, one of Junkyard's most popular gladiators. It worked well for him, and within weeks, many of his competitors were sporting the same modification to their legs.

The rotating knee allows the scrapper to rotate his body 360° around his knee. The motors in the knee provide a power assist to this rotation, allowing the scrapper to throw some vicious spin kicks.

It's only necessary to have this system installed in one leg, but many scrappers have it installed in both so their opponents can't predict from which side the kick is coming. Kicks thrown using this system gain a +4 bonus to damage. Each kick requires 1 Drain.

Cyber Organs

Cost: Varies
Type: Integral
Spirit Loss: 1 each
Mounts: None
Drain: 1 (1) each
Mount Location: Torso

In addition to cyber limbs, one of the other main creations of the medical community before the Last War was cyber organs. These were used in patients for whom no donors could be found or, in rare cases, to actually augment a patient's performance. Prewar versions of nearly every organ except the brain exist, but we'll just look at the ones which have actual game effects.

Heart: Cyber hearts are completely unaffected by stress. All Wind damage suffered by the scrapper is halved. The amount of Wind damage due to bleeding is not halved, but it is only suffered every other round.

Kidneys: In addition to taking over the functions of an ordinary kidney, an artificial one grants the scrapper a +4

bonus to *Vigor* rolls to resist drugs and toxins. Even if the roll is failed, the damage and duration of the toxin's effects are halved.

Liver: A scrapper equipped with one of these artificial organs can never get drunk (unless he shuts his liver off) because it instantly metabolizes any alcohol found in the bloodstream. Many gladiators' agents have one of these.

Lungs: Artificial lungs have a greater capacity than natural ones and are equipped with state-of-the-art particle filters. A scrapper equipped with artificial lungs can hold his breath for a number of minutes equal to his *Vigor* die plus four minutes. In addition, he gains a +4 bonus to all *Vigor* rolls made to resist the effects of airborne drugs, toxins, spores, and the like. He also suffers no Wind from pickin' up the pace.

For an extra $500, the lungs can be equipped with a carbon dioxide scrubber that doubles the amount of time your hero can hold his breath.

Cyber Organs

Organ	Prewar	Junker
Heart	$3000	$2000
Kidney	$2000	$1000
Liver	$1000	$500
Lungs	$2000	$1000

Data Jack

Cost: $500 ($200)
Type: Modular
Spirit Loss: None
Mounts: 1
Drain: None
Mount Location: Any

This is a standard data port connection. It allows your scrapper to plug into computers, cyborgs, cyber weapons, and so on—basically anything with a data jack. The jack includes a small compartment which holds a 6' data cable.

Jacks are normally mounted on the surface of the skin and they are easy to notice. For an extra $100, it's possible to have the jack recessed and covered with a small, skin-colored plug. Spotting a camouflaged jack requires an Incredible (11) *Cognition* roll.

Dexterity Booster

Cost: $8,000 ($6000)
Type: Integral
Spirit Loss: None
Mounts: 1 in each location
Drain: 2 (2)
Mount Location: Both arms and legs, torso

A dexterity booster system increases a scrapper's eye-hand (and foot) coordination. A central processor in the torso is jacked directly into the brainer's spinal cord and feeds instructions to sub-processors in the extremities. This increases your hero's *Deftness* die type by two levels and negates the penalty for using the off hand.

Overload: Extra drain can be spent to overclock the processors and increase performance. Each point spent on the overload increases *Deftness* by an additional die type.

Running the system at this level can be dangerous. The scrapper must make a Hard (9) *Vigor* roll each round the system is overloaded to avoid nerve damage. Failing this roll means the brainer's *Deftness* die drops by one type for 2d6 days. Going bust on the *Vigor* roll means the nerve damage is permanent.

Endo-armor

Cost: NA ($2000)/location
Type: Integral
Spirit Loss: None
Mounts: 1/location
Drain: None
Mount Location: Any

Endo-armor is popular with gladiators who want to ensure they have some protection at all times. This system installs a thin layer of ballistic fibers just below the scrapper's skin. This provides Armor 1 (not Armor 2 like the cyborg system of the same name) at each location so equipped. A few units of this system were created before the war for undercover agents, but they are so rare that this system is effectively not available in a prewar version.

As thin as the fibers are, they still interfere somewhat with the scrapper's normal musculature. Installing this system in either arm drops the waster's *Deftness* die type by a level with that limb. Installing it in either leg or the torso drops your hero's *Nimbleness* die by a type. Neither of these penalties apply if the system is installed in a cyber limb. Installing endo-armor in the head area gives the brainer puffy, swollen features and lowers the hero's *Mien* die type by one in situations where looks matter.

Exo-armor

Cost: NA ($500)/AV/Location
Type: Modular
Spirit Loss: None
Mounts: 1
Drain: Special
Mount Location: Any

This system installs large mounting studs in the selected locations on which armor made from metal plates and ballistic nylon are attached. This system is very popular among blood sport gladiators. Just like endo-armor, exo-armor is not available as a prewar system.

The maximum armor level possible with this system is 4. It's possible to have different armor levels in different locations. Many gladiators have high levels on their torsos and heads and lower levels on their limbs.

High levels of exo-armor can have a negative effect on your hero's performance. Look on the Exo-Armor Table and figure the penalty based on the highest armor level installed.

The armored plates can be attached or removed in a single action, and it's possible to buy extra plates for half of the normal cost per location. Many gladiators buy plates of various armor levels and reconfigure their armor levels before each match based on the event.

Electrification: A popular modification to this system installs a small electrical generator and insulated

mounts for the armor. When activated, the armor crackles with electrical energy which shocks anyone touching the plates. Any character who touches the armor or attacks it with a metal melee weapon must make a *Vigor* roll equal to 1d6 per Drain supplied to the armor. Failing the roll means the attacker takes an amount of Wind damage equal to the amount by which it was failed. The maximum Drain that can be supplied to the armor without overloading it is 4.

Exo-Armor

Armor	Effect
1	None
2	-2 penalty to *Nimbleness*
3	-2 penalty to *Nimbleness* and *Quickness*
4	-4 penalty to *Nimbleness* and *Quickness*

Expert System

Cost: $3000 ($2000)
Type: Modular
Spirit Loss: None
Mounts: 1
Drain: 2 (CPU size/3)
Mount Location: Head

This system adds some computing power to the scrapper's cranium. It can be used to run skill slugs or to store input from another cyber system. Your hero can use this system to run programs, store data, and play video games. This system is wired into the waster's brain, and actually uses portions of it for storage and processing.

The expert system has three main components: the processor, information storage, and input/output devices. The prices for all of these components is shown on the Expert System Table.

The processor determines how many programs and databases the scrapper can have open at once. Each possible processor has a slug rating. This is the number of slug's worth of programs it can run. Each program has a slug size. The computer can run any combination of programs with a combined slug size less than or equal to its slug rating. These programs can be pulled off a data slug, or called up from storage. Because

the computer uses portions of your hero's brain to process things, a waster can't use an internal processor with more slugs of processing power than his *Smarts* die type.

The CPU's storage is rated by the number of slugs of data it can hold. Each slug is approximately a terabyte of info (roughly equivalent to about 2000 present-day CDs). Each slug of storage can hold a full slug of raw data or store one slug of program. Because the system uses some of the waster's gray matter for storage, a hero can't have more slugs of storage than his *Knowledge* die type.

Whenever an expert system is damaged, roll 1d20 against the number of slug's worth of data and programs it has stored. If the result is less than or equal to this amount, a random program or database is corrupted and destroyed.

A scrapper has a number of options for inputting and outputting data. As far as input goes, all sensory data from cyber senses can be recorded and stored. Data can also be entered by data jack, radio, or slug reader.

A slug reader can be purchased as part of the expert system. It can read standard data slugs and can have up to 3 slug ports. Programs can be downloaded into memory or run directly off an inserted slug.

The slug reader can be mounted in any body location and should be recorded on the scrapper's sheet as a separate system. If the reader is ever damaged, roll 1d4 against the number of slugs currently plugged into it. If the result is less than or equal to this number, one randomly selected slug is destroyed.

Data can be output through a holographic cyber eye, datajack, radio, or through the slug reader to a blank data slug.

There are two primary forms of programs available: expert programs and databases (there are others, though, see *Cyborgs* for details).

Database programs are simply compilations of data and the software needed to manipulate it. They can be anything from road maps, to a list of all nonclassified US military bases, to a complete set of the Encyclopedia Brittanica (circa 2081).

Exactly what type of data your scrapper has is up to you, but it must be approved by your Marshal. If it's particularly valuable or rare information your Marshal may raise the price. Your Marshal also determines the slug size of the database. Some extensive databases may require two slugs of storage or even more.

Expert programs grant your hero the use of an Aptitude. There are expert programs available for nearly every Aptitude except for those which require an *arcane background*. The program only benefits your waster if it is programmed at a higher level than the scrapper's own skill in that area. Expert program slugs with Aptitude levels higher than 5 are very rare and highly expensive. Junkers with the *brains* power can create these programs.

Expert System

Component	Price
Blank slug	$200
CPU	$1000/slug
Database	$500+
Expert program	$2000/Aptitude level
Slug reader	$500/port
Storage	$500/slug

Gills

Cost: $2000 ($1000)
Type: Integral
Spirit Loss: None
Mounts: None
Drain: 1 (1)
Mount Location: Head or torso

This system adds a pair of artificial gills to the scrapper's chest or neck. These allow your hero to swim with the fishes like he's one of them. The only restriction to their use is that the area in which the gills are installed must be uncovered and allowed free access to the water.

Spotting the gills when not in use requires a Hard (9) *Cognition* roll.

Internal Bracing

Cost: $1000 ($500)/location
Type: Integral
Spirit Loss: None
Mounts: 1/location
Drain: 1 (1)
Mount Location: Any

Internal bracing is needed by scrappers who have installed Samson units in their cyber limbs. The bracing reinforces vital portions of the scrapper's skeletal structure and musculature and allows the brainer to use these pumped up limbs at their full strength without fracturing bones and ripping muscles.

The internal bracing system must be installed in each location of the scrapper's natural body other than the head and cyber limbs.

Metabolic Booster

Cost: $6000 ($4000)
Type: Integral
Spirit Loss: None
Mounts: 2
Drain: 1 per wound location
Mount Location: Torso

The metabolic booster speeds up the portions of the scrapper's metabolism which deal with healing. As long as the system is powered, your hero may make a natural healing roll every twelve hours.

Overload: Paying double the Drain required allows the scrapper to make a healing roll every 6 hours. Paying triple the cost allows a healing roll to be made once per hour. When figuring the overload Drain, all points over the required 1 per wound location are considered overload.

Power Jack

Cost: $500 ($200)
Type: Modular
Spirit Loss: None
Mounts: 1
Drain: None
Mount Location: Any

A power jack allows a scrapper to power external devices run on G-ray energy or battery power (or receive power from an external power source). Each jack can only handle a single type of energy, so if your hero has multiple power sources, he must purchase a separate jack for each. The power jack includes a small, hidden compartment containing a 6' power cable.

Radio

Cost: $1000 ($750)
Type: Modular
Spirit Loss: None
Mounts: 1
Drain: 1 (3)
Mount Location: Any

This is a high-tech piece of communications hardware. It has 40 channels and is capable of scrambled, tight-beam, and burst transmission. Under normal conditions (rare in the Wasted West), the set has a range of 100 miles. When used in tight-beam mode, the range is extended to 500 miles, but

the transmitter must be pointed directly at the receiver for this to work. The set can reach orbital satellites in this mode.

Overload: When overloaded, the transmitter can be used to jam radio communications within a 50-yard radius by broadcasting on all channels at once. Each extra point of Drain spent on the overload beyond the first increases the radius of the jammed area by an additional 50 yards.

Samson

Cost: $1000 ($750)/limb
Type: Integral
Spirit Loss: None
Mounts: 2
Drain: 2 (2)/limb
Mount Location: Cyber limb

Samson units can be installed in cyber limbs to give them some real muscle. Any limb with one of these systems has a *Strength* of d12+4. Use the scrapper's normal *Strength* coordination.

There's only one catch. Very few humans have a d12+4 *Strength*, which means that their bodies are not capable of handling the stresses caused by such a powerful limb. To use a Samson unit safely, the scrapper must have internal bracing installed (see page 116) or pump his *Strength* die up to d12+4 using an adrenal booster

Samson-equipped limbs can be used for things which put no stress on other body parts, like gripping, without danger. Other activities like lifting, swinging a weapon, and the like cause 1d6 massive damage to the scrapper for each level of difference in *Strength* between the limb and the scrapper unless the brainer has internal bracing.

Overload: For each extra point of Drain spent on this system, the limb's *Strength* die type is increased by a level.

Self Repair Unit

Cost: NA ($4000)
Type: Integral
Spirit Loss: None
Mounts: 2
Drain: Special
Mount Location: Cyber limb

The SRU means life to Harrowed cyborgs; for scrappers it means a lower repair bill.

Self repair units are not available as prewar systems because they require the arcane energy supplied by a soul tap or spirit battery to operate. They can, however, repair damage suffered by prewar systems. An SRU does this in much the same way as junkers build their devices: it transforms parts that are kind of like those needed to make repairs into the exact parts that are needed. Not only that, but it automatically installs them, too.

Scrapper SRUs are not as powerful as those in cyborgs. While cyborg SRUs can repair any system installed in the deader's body, scrapper SRUs can only repair systems in the body location in which they are installed. This is because the power couplings needed to network an SRU throughout the body are too invasive to use in a living human.

Before a scrapper can use her SRU to repair damage, she must have some spare parts. Just to keep things simple, these spare parts use the same categories as components for junker devices: electronic, mechanical, and structural. They are found in the same way also. Check out the scroungin' rules in Chapter 2 of the *Junkman Cometh* or Chapter 8 of the *Hell on Earth* rulebook for details. When scrounging on the body of a cyborg or scrapper, add +4 to the *scroungin'* roll.

The number of components required depends on what type of damage is being repaired. If wounds to a cybernetic limb are being fixed, one mechanical component and one structural component are needed per wound level repaired. If a disabled internal system is being fixed, one mechanical and one electronic component are needed. These components are simply held against the damaged area and are slowly absorbed as the repairs take place.

Using the SRU has a Drain of 1 per wound level healed and takes one minute per wound level or internal system fixed. The Drain is continuous throughout the duration of the repair process. Internal systems that span multiple body locations must be repaired separately in each area they are damaged. The SRU can never heal damage to a scrapper's organic parts.

SRUs can be equipped with an internal parts hopper so the scrapper doesn't have to worry about pulling out parts in the heat of combat. Each extra mount allotted to the SRU can store 4 components of any type. These components can be used to repair damage to any system in the same hit location as the SRU.

Overload: The speed at which systems are repaired can be increased to one wound level or system per round by spending double the amount of Drain needed to perform the repairs. When figuring the overload level, count each point of Drain above that normally required to repair the damage.

Bob just got whacked in the cyber arm with a chainsaw. He's taken three wounds to his right arm, and his Samson unit in that location has been damaged. That's a total of 3 wound levels and 1 system. To repair all of the damage, Bob needs 1 electronic, 4 mechanical, and 3 structural components. The Drain to repair the damage is 4. The repairs take 4 minutes (3 wounds + 1 system).

Smart Gun Link

Cost: $1000 ($800)
Type: External
Spirit Loss: None
Mounts: None
Drain: 1 (1)
Mount Location: Weapon

This isn't actually a piece of cyberware. It's a weapon accessory that can be used by any scrapper who has both a cyber eye and a data jack. The smart gun link can be installed on any handheld firearm with an Onerous (7) *tinkerin'* or *trade: gunsmith* roll.

The link allows the scrapper to see things from a "gun's eye" point of view. This gives a +2 bonus to hit with the weapon and also allows your brainer to use his weapon to look around corners and over obstacles.

For an extra $500 the link can be equipped with low-light vision capabilities.

Soul Tap

Cost: NA ($4000)
Type: Integral
Spirit Loss: None
Mounts: 1
Drain: None
Mount Location: Head

This system is what makes junker-built cyber limbs practical. The soul tap actually makes contact with your brainer's soul and siphons a portion of his life force away. As was described earlier, putting too much of a strain on your hero's soul can be very dangerous.

Some junkers have had soul taps installed in themselves, even though they have no other cyberware, simply to power their many gadgets.

Makin' Scrappers

At this point, some junker players are probably wondering how they can get in on the action and make some cyberware of their own. Before we address that, let's talk about fixing things up first.

Repairs

Rules for repairing cyborg equipment can be found in the *Cyborgs* book. Cyborg equipment is bleeding-edge military hardware that's difficult to patch up. Scrapper tech is a little easier.

Repairing a junker-built cyber limb requires a *science: occult engineering* roll against a TN of 5 plus 2 per wound level. Repairing other systems requires a roll against a Hard (9) TN. The repairs require the same components as if being made by an SRU.

Patching up prewar hardware can be done by a non-junker with a Hard (9) *science: cybernetics* roll and the appropriate spare parts. Junkers with the *biomechanics* power can repair them as outlined above for junker equipment.

Making Cyber Stuff

Many cyber systems can be created using existing junker powers. Samson units can be made with the *super strength* power, and a cyber eye, for instance, is made with the *sensor* power. It's simply a passive vision sensor with no die rating that takes up a single slot and has a Drain of 1. The specialized eyes simply add other sensors.

Your junker doesn't have much room to work with. Each mount location for cyberware can only hold 5 slots worth of equipment. That means a 15-slot device would use up three mounts.

As you design cyber systems, you'll probably find that your devices tend to be larger and have a higher Drain than those listed in this chapter. That's because it's assumed these systems were made by experienced junkers who made extensive use of the *miniaturize*

and *flow* tool tricks to decrease the size and Drain of the devices. Many junkers use oversized tech spirits to lower the Drain on the user, and less scrupulous junkers sometimes build minor side effects into their devices to shave a few slots off. Once your techno-mage masters these tricks he'll be building cyberware with the best.

Junkers who make a living at building bionic parts also know the *biomechanics* power. Most also tend to have powerful computer spirit browsers.

Biomechanics

Associated Spirits: Computer
TN: 9
Components:
    Chemical: 10% (see below)
    Electronic: 25%
    Mechanical: 15%
    Structural: None
Drain: Special

Biomechanics is the power used to make the basic cyber systems not covered by other powers: arms, legs, organs, and such. The basic Frame sizes and Drains for human-sized parts are listed in the Biomechanics Table. This power can be used to build parts for both cyborgs and scrappers.

When figuring component costs use the full slot rating for the listed Frame size. The chemical component cost only applies to scrapper parts because they must be coated with Immunatol to prevent rejection.

Biomechanics

Part	Frame	Drain
Arm	3	2
Hand/Foot	1	1
Immunatol (5 dose batch)	2	NA
Leg	4	3
Organ	2	2
Skull (cyborg only)	2	2
Torso (cyborg only)	4	3

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Right Arm

Systems

Item	Drain
1●2./1●4./1.	
3●4./1●4./2.	
●./1●4./3.	
●./1●4./4.	
●./●./5.	
●./●./6.	
●./●./7.	
●./●./8.	

Right Leg

Systems

Item	Drain
1●2./1●6./1.	
3●4./1●6./2.	
●./1●6./3.	
●./1●6./4.	
●./1●6./5.	
●./1●6./6.	
●./●./7.	
●./●./8.	

Head

Item	Drain
1●2.	
3●4.	

Torso

Systems

Item	Drain
1.	
2.	
3.	
4.	

Equipment

Left Arm

Systems

Item	Drain
1●2./1●4./1.	
3●4./1●4./2.	
●./1●4./3.	
●./1●4./4.	
●./●./5.	
●./●./6.	
●./●./7.	
●./●./8.	

Left Leg

Systems

Item	Drain
1●2./1●6./1.	
3●4./1●6./2.	
●./1●6./3.	
●./1●6./4.	
●./1●6./5.	
●./1●6./6.	
●./●./7.	
●./●./8.	

Notes

Power Drain 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Body Doc

Traits & Aptitudes

Deftness 2d6
  Shootin': pistol 3
Nimbleness 2d6
  Climbin' 1
  Fightin': brawlin' 2
  Sneak 1
Strength 2d6
Quickness 3d6
Vigor 3d8
Cognition 2d8
  Search 3
  Scrutinize 3
Knowledge 2d12
  Area knowledge:
    Junkyard 2
  English 2
  Medicine: surgery 3
  Science: occult
    engineering 5
Mien 1d6
Smarts 3d10
  Scroungin' 4
  Tinkerin' 4
Spirit 2d10
  Guts 3
Wind 16
Pace 6
Edges
  Arcane Background:
    junker 3
  Computer Browser 3
Hindrances
  Cautious –2
  Squeaky –2
  Stubborn –2
Powers: Biomechanics,
  brains, sensor
Tool Tricks: Miniaturize, flow
Gear: .38 snubnose revolver, 50
  rounds of .38 ammo, surgical
  tools, electronics tools

Personality

Um, why yes, I believe I could make the system you've described. I'll warn you now that it's going to be expensive, and I'll require cash up front. I'm sorry, threats will get you nowhere. It's payment up front or nothing. Well, going somewhere else is your prerogative, but I doubt you'll find anyone else who can build a custom system like that. Ahh, I thought you'd see it my way.

Quote: "I'm afraid that's going to have to come off!"

Gladiator

Traits & Aptitudes

Deftness 3d6
　Throwin': knife 3
Nimbleness 2d12
　Climbin' 2
　Fightin': brawlin', sword 5
　Sneak 2
Strength 2d10
Quickness 3d10
　Quick Draw: sword 1
Vigor 3d8
Cognition 2d8
　Search 2
Knowledge 1d6
　Area knowledge:
　　Junkyard 2
　English 2
Mien 2d6
　Overawe 2
　Performin': trash
　　talk 2
Smarts 2d6
　Streetwise 2
Spirit 2d6
　Guts 2
Wind 24
Pace 12
Edges
　Thick-skinned
　　3
　Tough as Nails
　　5
Hindrances
　Big Mouth –3
　Bloodthirsty –2
　Heroic –5
Gear: Cheap sword (-2
　damage), large knife,
　boiled leather shirt
　and pants.

Personality

I may be just starting out, but it won't be long before I see my name up in lights at the Hellstromme Arena. I'm not the fastest or the strongest fighter out there, but I've got a lot of heart, and my agent says that counts for a lot. He better be right, he's getting a 25% commission.

Quote: "Ha! Was that your best shot?"

Scrapper

Traits & Aptitudes

Deftness 2d6
　Shootin': pistol 3
Nimbleness 2d12
　Climbin' 3
　Dodge 3
　Fightin': brawlin', whip 5
　Sneak 2
Strength 2d10 (2d12+4 with cyber arm)
Quickness 3d10
Vigor 3d8
Cognition 3d6
　Search 3
Knowledge 2d6
　Area knowledge:
　　Junkyard 2
　English 2
Mien 2d6
　Overawe 3
Smarts 1d6
　Streetwise 3
　Tinkerin' 2
Spirit 1d8 (was 3d8)
　Guts 2
Wind 16
Pace 12
Edges
　Belongin's 10
　Renown (Junkyard) 3
　Veteran o' the Wasted
　　West 0
Hindrances
　Big Britches −3
　Greedy −2
　Ugly as Sin −3
Cyberware: Cyber arm, cyber eye (wide angle, light enhancement), cyber hand (buzzsaw), internal bracing, Samson, soul tap (8), SRU
Gear: Whip, boiled leather pants, $100

Personality

I've been around for a while, and I've got the scars to prove it. Most Friday nights, I'm the favorite down at the Pit. There's nothing like hearing hundreds of people all hollerin' your name. The money ain't bad, either

The arm I had taken off myself. The eye, well, I lost that when I got blindsided during a spiked cage match. That won't happen again, 'cuz I got me a wide angle lens in the new one.

Quote: "I'll give you 10 to 1 that I take him down in the first round."

Sky Pirate Scout

Traits & Aptitudes

Deftness 2d8
　Shootin': pistol, machine-gun 4
Nimbleness 3d12
　Climbin' 1
　Flyin': fixed wing 5
　Sneak 2
Strength 3d6
Quickness 2d10
Vigor 3d6
Cognition 4d8
　Search 3
Knowledge 2d6
　Area knowledge:
　　Central Rockies 2
　English 2
Mien 1d6
Smarts 2d10
　Scroungin' 3
　Tinkerin' 3
Spirit 2d6
　Guts 3
Wind 12
Pace 12
Edges
　Belongin's (ultralight
　　& helmet) 4
　Mechanically
　　inclined 1
　Sand 1
　Sense o' Direction 1
Hindrances
　Enemy (Combine) –3
　Obligation (Sky
　　Pirates) –2
　Superstitious –2
Gear: Ultralight, Colt
　.45, 50 rounds of .45
　ammo, flight helmet
　(AV 2), large knife,
　shoulder holster, $60

Personality

I was flying up in Montana a few weeks back when a bunch of yokels in camouflage opened up on me with a machine-gun. Before I could get clear, they'd punched a hole in my fuel tank. I made it a few more miles on fumes, and then set down on a straight stretch of highway.

Luck was with me that day, cause a Convoy scout truck saw me come down. I traded some ammo for fuel and a piece of gum to patch the tank. I also got me a few extra bottles of fuel.

Once I had my crate patched up, I took off and went looking for that gun crew. When they opened up on me again, I shared some of my extra fuel with 'em. They won't be bothering anyone else.

Quote: "Hold on! Things are going to get a little bumpy!"
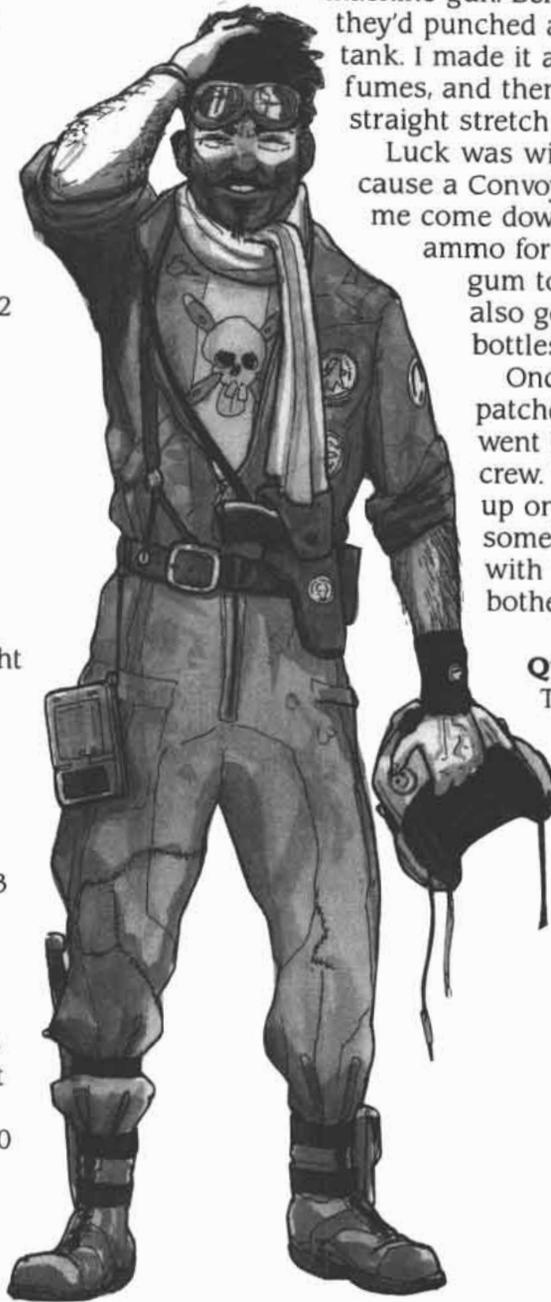
The Marshal's Handbook
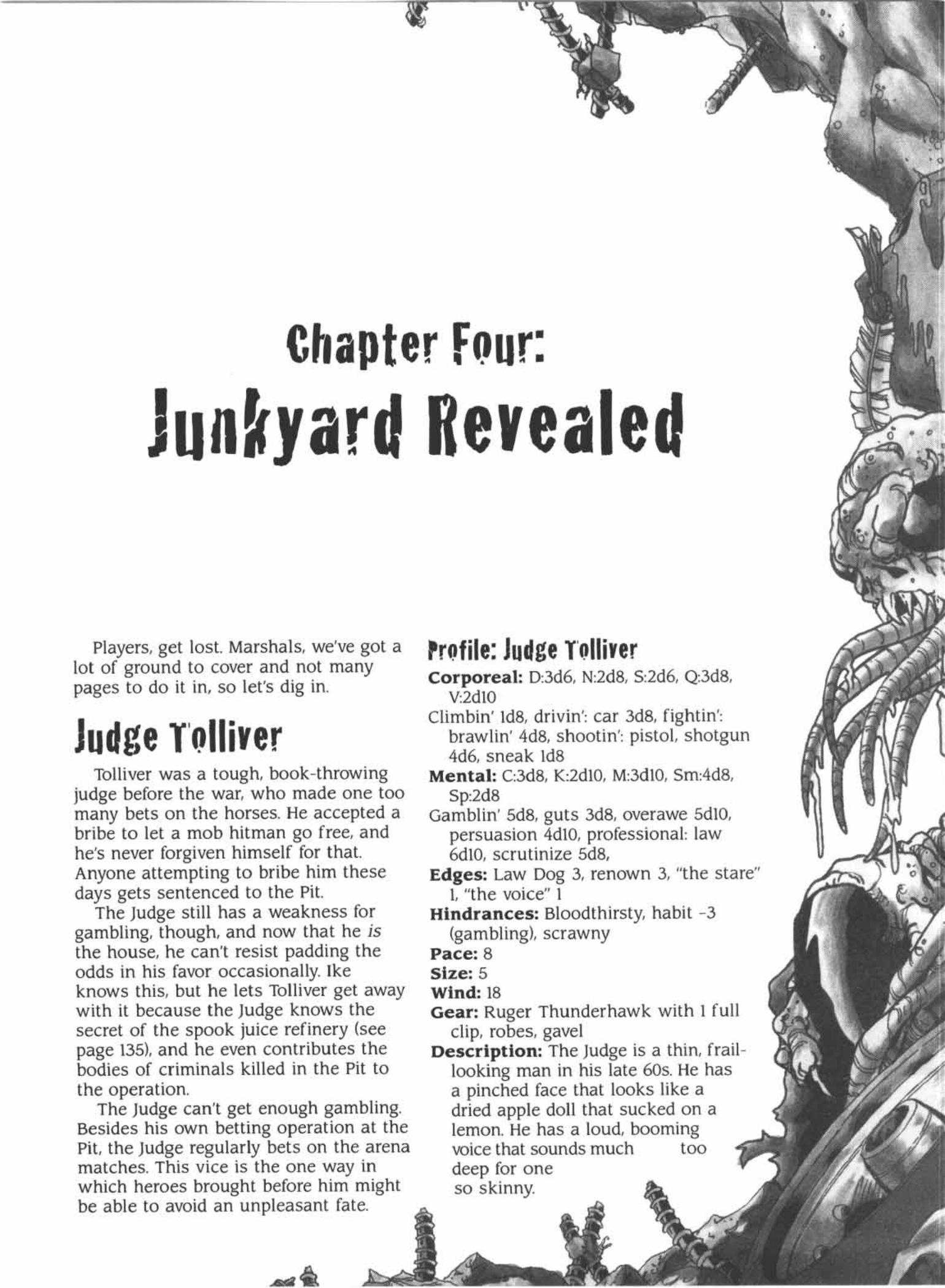
Chapter Four:
Junkyard Revealed

Players, get lost. Marshals, we've got a lot of ground to cover and not many pages to do it in, so let's dig in.

Judge Tolliver

Tolliver was a tough, book-throwing judge before the war, who made one too many bets on the horses. He accepted a bribe to let a mob hitman go free, and he's never forgiven himself for that. Anyone attempting to bribe him these days gets sentenced to the Pit.

The Judge still has a weakness for gambling, though, and now that he *is* the house, he can't resist padding the odds in his favor occasionally. Ike knows this, but he lets Tolliver get away with it because the Judge knows the secret of the spook juice refinery (see page 135), and he even contributes the bodies of criminals killed in the Pit to the operation.

The Judge can't get enough gambling. Besides his own betting operation at the Pit, the Judge regularly bets on the arena matches. This vice is the one way in which heroes brought before him might be able to avoid an unpleasant fate.

Profile: Judge Tolliver

Corporeal: D:3d6, N:2d8, S:2d6, Q:3d8, V:2d10

Climbin' 1d8, drivin': car 3d8, fightin': brawlin' 4d8, shootin': pistol, shotgun 4d6, sneak 1d8

Mental: C:3d8, K:2d10, M:3d10, Sm:4d8, Sp:2d8

Gamblin' 5d8, guts 3d8, overawe 5d10, persuasion 4d10, professional: law 6d10, scrutinize 5d8,

Edges: Law Dog 3, renown 3, "the stare" 1, "the voice" 1

Hindrances: Bloodthirsty, habit –3 (gambling), scrawny

Pace: 8

Size: 5

Wind: 18

Gear: Ruger Thunderhawk with 1 full clip, robes, gavel

Description: The Judge is a thin, frail-looking man in his late 60s. He has a pinched face that looks like a dried apple doll that sucked on a lemon. He has a loud, booming voice that sounds much too deep for one so skinny.

The Scorched Earth

The infertile ground around the city is a side effect of the ghost rock bombs. Six times a Deadland began to form over the city, and six times it collapsed due to the absorptive qualities of the energy shield. The inhabitants of the city were protected from the worst effects of this by the shield and dome, but the land around the Iron Oasis was not. All living things within five miles of ground zero were utterly destroyed. The ground itself was leached of all life-giving nutrients, leaving behind only a dry, infertile sand.

Yarders don't talk about it much, but it's become the custom to cremate bodies or at least remove the brain before burial. The scorched earth around Junkyard seems to give rise to an unusually high number of walking dead and Harrowed. Any heroes buried here can draw an extra two cards to determine if they return from the great beyond. If they do, however, they automatically get the *degeneration* Hindrance at level 5.

The Glowing Dome

The dome over Junkyard was another example of Hellstromme's super science, and goes to show that it's good to plan ahead. It did, in fact, soak up all the radiation, both normal and supernatural, caused by the bombs. The energy absorbed by the dome, as well as the G-rays and thermal energy absorbed by the city's energy shield, were stored in enormous capacitor banks deep beneath Junkyard.

So, why did Hellstromme build the dome and shield, and what is all this energy going to be used for? And where is Hellstromme, anyway? What about the Denver shield? Well, we can't tell you just yet. But trust us, when we do let you know, it'll be big.

Junkyard Memorial

The top floor of the hospital used to be the mental ward. For nearly a century, the mentally ill of the city were subjected to all sorts of experimental treatments devised by Hellstromme and his staff. Some recovered, some didn't. Either way, the mental anguish in this place attracted a dangerous type of spirit known as a gibber.

Gibbers have an insidious attack. They insinuate themselves into their victims' minds, warp their senses of reality, and drive them to insanity.

Profile: Gibber

Corporeal: D:3d6, N:2d6, S:3d6, Q:4d8, V:3d6
Fightin': brawlin' 4d6
Mental: C:3d8, K:3d6, M:4d8, Sm:3d8, Sp:4d12
Overawe 5d8
Pace: 6
Size: 6
Wind: 18

Terror: 11
Special Abilities:
  Damage: Pseudopod (STR+1d6) (Only while manifested.)
  Immunity: Normal weapons
  Incorporeal
  Insanity Attack: Roll a contest of *Spirit* between the creature and its intended victim. If the creature succeeds, it has entered its victim's mind and can dredge around in there to learn all of the victim's fears and neuroses. It then uses this knowledge to alter the victim's perceived reality and create situations which attack these fears. A person under attack by a gibber will see and hear things that aren't there. After each such situation (it's up to you to determine exactly what these are), roll another contest of *Spirit*. If the victim wins three of these contests in a row, the spirit is ejected from his mind. Each time the gibber wins, the victim's effective *Spirit* drops by a die type. If the victim's *Spirit* drops below d4, the gibbber wins. The victim must make a final *Spirit* roll (using his full *Spirit*) against a TN of 11. If the victim fails, he commits suicide, If he succeeds, he lives, but he's reduced to a gibbering madman.
  Weakness: Administering Prozac or similar drugs to a victim while under attack causes the spirit to manifest itself. It can then be attacked normally.
  Description: These creatures are normally invisible, but if forced to manifest, they appear as amorphous blobs covered with multiple eyes and mouths.

Hellstromme High

Sounds like a bad Troma movie, doesn't it?

The problem at the school is a little more mundane than that facing the hospital. There is a storm drain near the school which has an opening to Down Below. Moorlocks lurk in the drain and lure the younger children over with toys and candy scavenged from beneath the city. Once the kid gets too close, he gets snatched.

Rope Trick

The other people disappearing from Junkyard's streets are also getting eaten. They are being nabbed by a creature known as the rope tongue. These creatures were originally subterranean, but migrated up into the Steel Sky after the construction of Sub-level Two disturbed their habitat. They've been around for a while in small numbers, but when the population of the city was much larger, their victims were simply written off as lurker gang victims.

The rope tongue has a thick, stubby body that resembles a rock, and eight, small hook-like feet that can latch onto bare stone. The creature moves very slowly, and it usually hangs from the roof of a cavern or the Steel Sky. It uses its long, ropy tongue to grab prey and haul them to its fang-filled mouth.

Profile: Rope Tongue

Corporeal: D:2d6, N:4d8, S:4d12, Q:3d6, V:3d8
Climbin' 5d8, fightin': brawlin' 5d8
Mental: C:2d8, K:1d4, M:1d4, Sm:2d6, Sp:2d8
Pace: 4
Size: 6
Wind: *16*
Terror: 7
Special Abilities:
  Damage: Bite (STR+2d8, AP1), tongue (STR+1d6)
  Tongue: The rope tongue has sensory organs on its 40' tongue, so the creature itself is not always visible when it attacks. The tongue has a size of 3 and withdraws if maimed. If the tongue hits with a raise, it has grappled its victim. After grappling, the creature pulls its victim 20' closer to its maw on each of its actions. If the victim can grab onto something, the creature must win a contest of *Strength* to pull its victim.
Description: See above.

Cyber Stability

If your heroes purchase cyberware, it's necessary to determine the equipment's Stability. You can set it yourself or use this simple system:

Assume the base Stability of most cyberware is 18. Doc Edna's stuff starts with a Stability of 20 and Doc Simpson's equipment usually starts around 16. Draw a card and look on the Cyber Stability Table below.

Cyber Stability

Card	Stability Modifier
2	-4
3-8	-2
9-J	0
Q-K	+2
A	+4
Joker, Red	+6
Joker, Black	-6

Monticello

A hero attempting to shoplift from Parts is Parts should roll a contest of her *sleight o' hand* versus Monty's *Cognition* of 4d10. If Monty wins, an alarm sounds and a spotlight mounted on the ceiling centers on the offender. Attempting to flee causes the thief to be attacked by a NA SAW with a *shootin'* Aptitude of 5d10. MG drags all living shoplifters to the Pit for a talk with Judge Tolliver.

G-Ray Service

The G-ray service being provided by Junkyard's government is actually a cover story for a much more ambitious project. Doc Schwartz knew there was no way he could keep the construction of something as large as a ghost rock reactor a secret, so he came up with the G-ray service to disguise its real purpose.

The real reason for the reactor's construction is to provide energy for a number of powerful beam weapons which have been secretly emplaced on the hills around the city. The weapons are hidden underground, but in the event of an attack, they can quickly rise to the surface. The gun emplacements have been spaced to give the city complete coverage against an air or missile attack. Many of the weapons can also bear to engage ground targets approaching the city from the south.

These weapons are intended as a safety net in the event that the Sky Pirates are defeated or a surprise missile attack is launched from Denver. The system can handle small numbers of aircraft or missiles, but a large-scale attack would probably overwhelm the guns through sheer numbers. Some of the weapons are laser cannons scavenged from derelict hover tanks, and others are beam weapons designed by Doc Schwartz himself.

The weapons can only be accessed through underground tunnels which are guarded by both the best of the militia and sophisticated electronic security systems.

Instant Experts

The teaching machine used by Tom and Earl is an older model, and it's different from those used by the syker training programs. Because the machine can't make as deep a mental link as the syker machines, it takes much longer for the user to ingest the information. Training on this machine takes four hours per Aptitude level gained. The machine also can't teach any skills or powers which require the *arcane background* edge to use.

Tom and Earl's machine isn't totally reliable. Draw a card each time a hero uses it. On a deuce, the time is spent but the skill didn't take. On a Joker (either color), the brainer suffers a brain embolism that causes 6d12 damage to the noggin.

Heroes who already possess an Aptitude gain no benefit from using the machine until they have spent enough time on it to surpass their current Aptitude level.

Sludge Creek

The attempts to clean up the creek didn't kill the monster living in it, they just made it go dormant for a while. Once pollution began to seep into the water once again, Sludge awoke from where it had burrowed deep in the mud of the creek bed.

Sludge is the embodiment of all the creek's pollution and it's actually one of the very first toxic spirits (we'll discuss these in detail in the upcoming *Spirit Warriors* book). It's aware that if detected, it can be killed (although it would takes some serious firepower to do so), so Sludge is careful when it hunts. It prefers to hunt at night and chooses solitary victims over groups.

The acidic blob has also found ways of entering the city's water system. It occasionally pops out through shower heads and faucets when it's in the mood for a midnight snack.

Profile: Sludge

Corporeal: D:2d6 (tendrils), N:1d6, S:4d12+2, Q:3d6, V:3d12
Fightin': brawlin' 5d6
Mental: C:2d8, K:1d4, M:1d4, Sm:1d6, Sp:3d8
Search 4d8, trackin' 3d8
Pace: 6
Size: Special
Wind: NA
Terror: 13
Special Abilities:

Acidic Tendrils: Sludge can manifest and control two tendrils at once. These can each slap individuals for brawling damage. If Sludge hits with a raise, the tendril covers the target and causes an additional 1d20 points of acid damage to the affected location. The tendril covers the victim in sticky goo, so armor does not apply unless it is completely sealed. Breaking free of a tendril once it's latched on requires the victim to beat Sludge in an opposed *Strength* roll. A single success means that Sludge continues to hold on and inflicts damage at the beginning of each round. A raise means the hero breaks free, but continues to suffer acid damage until he immerses himself in water.

On two or more raises, the hero breaks free so quickly that Sludge's tendril "snaps" back and pulls most of its deadly goo with it—the hero suffers no further ill effects.

Immunity: Sludge is completely immune to bullets, blades, and other forms of physical attack. Only fire, energy weapons, and explosives cause the creature harm. Even these forms of attack can only make Sludge withdraw from a fight. After suffering a total of 300 points of damage, the creature beats a retreat.

Weakness: Fire. Being made partially of ghost rock, Sludge takes double damage from flame, but it can extinguish itself in an action so as not to actually catch fire.

Weakness: The only way to permanently kill Sludge is to destroy its heart. This is a chunk of ghost rock the creature distilled from the creek's waters. It was originally hidden in the flooded basement of the Empire Mill, but when that building was demolished, Sludge temporarily moved it. It has since used its acid to burrow into the concrete slab beneath the new reactor, and made a nice, cozy nest for its heart not far from the main reactor core. The heart requires 200 points of damage to destroy, takes double damage from fire, and has an Armor Value of 2.

Description: A big, amorphous blob of goo.

D-20

The D-20 is an improved version of the NA assault rifle. It has a heavier barrel, an integral compensator, and an integral bipod. These features halve the normal recoil penalties for firing multiple bursts, and eliminate them completely when the gun can be braced with the bipod.

Missing Ghost Rock

Although the ghost rock in the Wasatch Mountains will run out eventually, it's not going to be mined out any time in the near future. The factors Bo mentioned did play a small part in the drop in production, but the actual reason is much simpler: Someone is stealing it.

Dylan Jaeger

That someone is Dylan Jaeger, a junker and high-placed official in the Junkyard government. Jaeger's official title is Head of Mining Production. His unofficial title should be "Slimeball-at-Large."

Jaeger's plan is as simple as it is ballsy. Using his own money, he bought a warehouse across the street from the main ghost rock storage facility and had it marked as an official city building. His accomplices, who work as foremen at the mines, send about 10% of the mines' output to this bogus warehouse and make sure that the diverted ghost rock isn't included in the mines' production records. So, as far as anyone can tell, there's no ghost rock missing; it simply looks as if the mines' production has dropped off.

Jaeger has, of course, launched "an extensive investigation" into this "troubling development" but so far his office has come to "no firm conclusions." The junker knows that his phony investigation won't hold water for too long, but he figures that by the time anyone gets suspicious, it'll already be too late.

The Technocrats

So, what's he doing with all that ghost rock? Well, Jaeger has a nasty case of the Taint, and he's out to take over Junkyard. He's been selling the ghost rock and using the proceeds to hire a private army of mercenaries and malcontents.

Some of the hired guns are already in the city, and more are arriving every week. So as not to raise suspicion, the mercs are entering Junkyard in small groups and keeping a low profile while waiting for Jaeger's signal to attack. It was some of these mercs who captured Librarian Knudsen.

The crazed techno-mage isn't working alone, he has a number of co-conspirators working with him. Most of them are junkers. Some share his vision of a Junkyard ruled by a technocratic council of junkers, others are just in it for the power. Regardless of their motivations, Jaeger and his cronies pose a very real threat to Ike's government.

The tainted techno-shaman has a few final preparations to complete before he makes his move. We don't have room for all the details here, but your posse can get involved in thwarting Jaeger's plans and discover the fate of Librarian Knudsen in the upcoming *Urban Renewal* adventure.

Down Below

The conditions Down Below are just as wretched as Bo describes them. There are well over 1000 Moorlocks living beneath Junkyard. The original inhabitants of Down Below were mostly normal people who couldn't or wouldn't leave the sub-levels for various reasons. Now, however, 13 years later, there is an entire generation of Moorlocks who have known nothing but life in the dark, fetid bowels of the city. As time passes, the cannibal tribes beneath Junkyard become increasingly primitive and feral. Few of the younger Moorlocks are able to read, and most have only rudimentary language skills.

There are four major tribes of Moorlocks. Three tribes live on Sub-level One, and the fiercest tribe, the Sub-dwellers, lives on Sub-level Two. The tribes on the upper level fight with each other, but they often band together against the Sub-dweller raids.

Profile: Moorlock

Corporeal: D:3d6, N:3d6, S:3d8, Q:2d8, V:3d8

Climbin' 3d6, dodge 3d6, fightin': brawlin', knife 3d6, shootin': pistol, crossbow 2d6, sneak 4d6

Mental: C:3d8, K:2d6, M:2d6, Sm:3d6, Sp:2d8

Area knowledge: Down Below 3d6, scroungin' 4d6, survival: urban 4d6, trackin' 3d8

Edges: Thick-skinned 3

Hindrances: Bloodthirsty –2

Pace: 6

Size: 6

Wind: 16

Special Abilities:

Weakness: Light. Spending long periods of time in the darkness of Down Below has made the Moorlocks' eyes very sensitive to light. Exposing Moorlocks to bright lights imposes a –2 modifier to all Aptitude rolls they make.

Gear: Ragged clothes, large knife

Description: Moorlocks are extremely pale humans with wide eyes. They wear ragged, ill-fitting clothing. Many of them have large, oozing sores on their skin due to vitamin deficiencies caused by their cannibalistic diet.

Buck Masterson

Buck's real name is Claude Watkins. He was a sergeant in the US Army during the war, and drifted to Junkyard in 2090. He changed his name when he decided to get into the guide business.

One of the reasons for his success is that he's worked out a deal with the Owens tribe—the most civilized of the three upper level tribes. In exchange for fresh fruit and vegetables, this tribe allows Buck's groups to pass through their territory unmolested. The tribe even captures other Moorlocks and releases them in the path of Buck's "safaris" to give his customers something to shoot at. Buck takes great care to keep this a secret, because feeding the Moorlocks (voluntarily) is a crime punishable by banishment.

The Hellstromme Vaults

The stories about the Hellstromme facility beneath Sub-Level Two are true. There is an enormous, sprawling complex carved deep within the bedrock under Junkyard. The capacitors storing the energy absorbed by the city's shield and dome are at the heart of this facility.

The stories about the complex's guardians are also true. It is guarded by a small army of automatons, mobile gun platforms, and electronic traps and security systems. The militia has actually attempted to penetrate the complex on more than one occasion, and all they succeeded in doing was getting a lot of their soldiers killed. Ike has given up trying to enter the place until the Combine has been dealt with.

What's going on here? Well, you'll have to bear with us a little longer. We don't have room to detail the Hellstromme Vaults here, but they will play a major part in a future adventure. As to the sightings of Dr. Hellstromme down there, people see what they want to see.

The Missing Patrol

The militia force which was wiped out Down Below was the victim of an ambush. The Combine saboteurs they were chasing actually have a base of operations on Sub-level Two, as well as an informal treaty with the Sub-dwellers. In exchange for occasionally helping in raids against the tribes on Sub-level One, the Moorlocks keep the Combine troops informed about the comings and goings of Topsiders (surface-dwellers).

The Combine base Down Below houses a number of mercs (who don't have headbanger chips), about 20 Black Hats, and a handful of heavy combat cyborgs who were actually smuggled into the city in pieces and then reassembled. Throckmorton's troops spend most of their time gathering information on the city's defenses. This data is then relayed to Denver by courier. This force only takes direct action against Junkyard when ordered to by Throckmorton himself, but they have stirred up quite a bit of trouble through the Worker's Alliance (see page 137).

Secret Police

Ike does, in fact, maintain a secret police force which answers only to him. He refers to this group of roughly 30 elite soldiers as his Black Hands because they get their hands dirty so he doesn't have to. All of the Black Hands are veteran soldiers, four of them are sykers, and two are cyborgs.

The group keeps tabs on troublemakers and groups opposed to Ike's government, and has, on occasion, made some of Ike's enemies disappear. Ike dislikes giving the order for such things, but he is realistic about Junkyard's chances against the Combine, and he knows that the city has little chance of survival if it's split by internal power struggles.

The Black Hands are led by Colonel Jun Yokazaki, a veteran of the Japanese Army.

Profile: Junkyard Militia

Corporeal: D:2d8, N:3d6, S:2d6, Q:3d6, V:2d8

Climbin' 2d6, drivin': car 3d6, fightin': brawlin' 3d6, shootin': machine-gun, pistol, rifle 4d6, speed-load 2d8, sneak 3d6

Mental: C:2d6, K:2d6, M:3d6, Sm:2d6, Sp:2d6

Area knowledge: Junkyard 3d6, scrutinize 3d6, search 4d6, streetwise 3d6, trackin' 2d6

Edges: Law dog 1

Pace: 6

Size: 6

Wind: 14

Gear: D-20 rifle, 4 full magazines, and a large knife. Many also wear kevlar vests (AV 2).

Description: Militia members wear a wide variety of uniform styles, but all have a large "JM" patch on their shoulders.

Profile: Typical Black Hand

Corporeal: D:2d10, N:3d8, S:2d8, Q:4d8 V:2d8

Climbin' 3d8, drivin': car 4d8, fightin': brawlin', knife 5d8, shootin': machinegun, pistol, rifle 5d10, speed-load 4d8, sneak 5d8

Mental: C:3d8, K:2d8, M:3d6, Sm:2d8, Sp:2d8

Area knowledge: Junkyard 3d8, scrutinize 3d8, search 4d8, streetwise 3d8, trackin' 4d8

Edges: Law dog 1, tough as nails 5

Pace: 6

Size: 6

Wind: 26

Gear: When undercover, most carry a large pistol, two spare clips, and a concealable Kevlar vest. When on a raid, the Black Hands carry D-20 rifles, 4 full magazines, large knives, infantry battlesuits, 4 frag grenades, two tear gas grenades, gas masks, and night vision gear.

Description: Regardless of what disguise they might be wearing, members of the Black Hands always have a predatory look about them.

Spook Juice is Really People

Besides helping Ike keep a firm grip on the reins of power, the Black Hands also work to ensure that no one learns Junkyard's biggest secret. The spook juice the city trades for food has a secret ingredient: human blood. The only people who know this are Ike, Doc Schwartz, Judge Tolliver, the Black Hands, and a few junkers who work the night shift at the refinery.

This hasn't always been the case. During the first few years after the bombs dropped, the mines around Junkyard produced more than enough ghost rock to meet the refinery's needs, but as the city's population grew and more and more gangs came to trade, demand began to quickly outstrip production.

Doc Schwartz, who was a mad alchemist before being trained as a junker, knew of the properties of philosopher's stone (made by mixing ghost rock with blood), and he experimented with using this in his spook juice formula. To his surprise, he found that this new formula was incredibly efficient. Instead of creating 5 gallons per ounce of ghost rock used, it created nearly 25 gallons. This huge jump in production was more than enough to allow Junkyard to meet its spook juice needs and allow the city to stockpile a small reserve of ghost rock.

Shortage

Most of the blood for this secret formula has come from executed criminals and scrappers who've died in the ring. Judge Tolliver knows what's going on, and makes sure that the bodies of those who die in the Pit make a trip to the refinery before being taken to the power plant for cremation. Unfortunately, the Judge's heavy-handed justice has backfired in a way. Increasing law and order in Junkyard means that this source of "donors" is drying up.
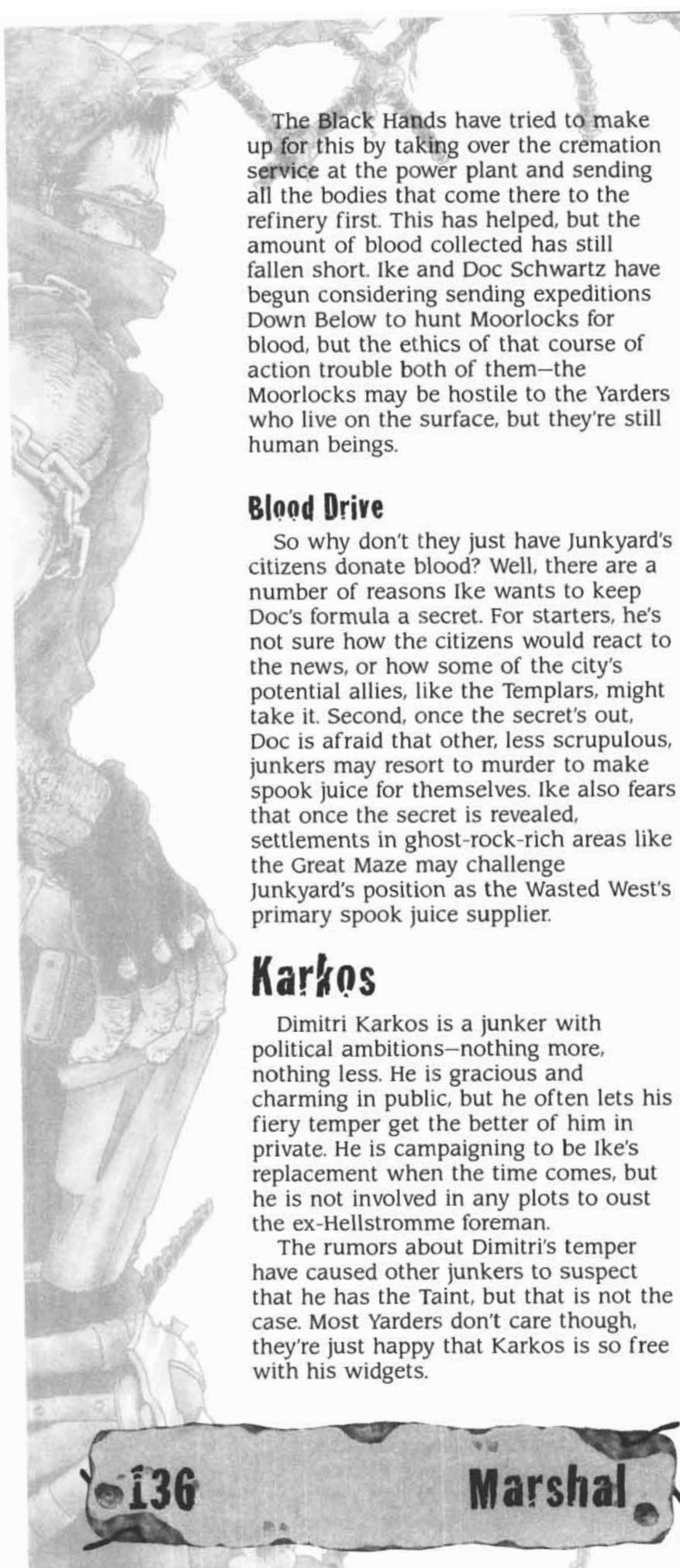
The Black Hands have tried to make up for this by taking over the cremation service at the power plant and sending all the bodies that come there to the refinery first. This has helped, but the amount of blood collected has still fallen short. Ike and Doc Schwartz have begun considering sending expeditions Down Below to hunt Moorlocks for blood, but the ethics of that course of action trouble both of them—the Moorlocks may be hostile to the Yarders who live on the surface, but they're still human beings.

Blood Drive

So why don't they just have Junkyard's citizens donate blood? Well, there are a number of reasons Ike wants to keep Doc's formula a secret. For starters, he's not sure how the citizens would react to the news, or how some of the city's potential allies, like the Templars, might take it. Second, once the secret's out, Doc is afraid that other, less scrupulous, junkers may resort to murder to make spook juice for themselves. Ike also fears that once the secret is revealed, settlements in ghost-rock-rich areas like the Great Maze may challenge Junkyard's position as the Wasted West's primary spook juice supplier.

Karkos

Dimitri Karkos is a junker with political ambitions—nothing more, nothing less. He is gracious and charming in public, but he often lets his fiery temper get the better of him in private. He is campaigning to be Ike's replacement when the time comes, but he is not involved in any plots to oust the ex-Hellstromme foreman.

The rumors about Dimitri's temper have caused other junkers to suspect that he has the Taint, but that is not the case. Most Yarders don't care though, they're just happy that Karkos is so free with his widgets.

The Gonzers

The Guardians of the New Science are much more than they seem. Adrian Kellam, and the majority of the other leaders of this bizarre cult, are all former Hellstromme Industries employees. Kellam formed the cult a few years ago, after he received a message from the missing doctor himself. Hellstromme's note contained explicit instructions for Kellam, ordering him to recruit some other scientists and to gather certain items of equipment together. The message also told Kellam how he could safely access the vaults below the city.

Kellam developed the idea of the cult on his own. He knew that to carry out Hellstromme's orders his group would need to spend a lot of time in the old HI facilities, and he figured that if they posed as a bunch of addle-brained cultists worshipping the great scientist, people would be less likely to wonder what they're up to. We don't have the space to detail exactly what they *are* up to here, but all will be revealed as the *Hell on Earth* story unfolds.

To Kellam's surprise, the cult actually caught on. Many of the group's newest recruits are true believers. Kellam actually welcomes this, although it means having to devote more time to tending his flock because it makes the core group's cover that much more secure.

All of the cultists have had data jacks installed. They use these to plug into the data screens they wear. The screens translate their thoughts into text. The devices also contain short-range radios that pipe messages directly to the cultist's brains through the data jack and allow the cultists to pull off their "telepathy" trick.

The cult's success has backfired in one regard, however. Because the Gonzers are generally regarded as a bunch of loons, Ike doesn't take them seriously, and he has refused Kellam's repeated requests to open a temple in the HI Headquarters building. This is a serious problem for Kellam, because there is equipment in the building which is vital to his plan, and Hellstromme's orders forbid him from revealing his true purpose to Ike.

The Worker's Alliance

The Worker's Alliance is actually a pawn of the Combine. The group's leader, Gregor Ilyanich, is actually an infiltrator cyborg who gets his marching orders from Denver. The rest of the Alliance's members are simply dedicated communists and socialists out to improve the lot of the working man in Junkyard. They've swallowed Gregor's radical rhetoric, though, and are more than willing to die in "attacks against the bourgeois establishment." The orders, and often the weapons, for these attacks come straight from Throckmorton himself.

Sarge

Sarge was designed as a hostage "negotiator." His job was simple. He went into a hostile situation to negotiate, and then, once he had sized up the situation, he pulled out his guns and went to work.

Cole Ballad and a few other Law Dogs have tried to recruit Sarge, but he is uninterested in continuing his law enforcement career. The truth is, Sarge worked for the Agency, and he lost a number of friends to "Big Fifty" Harman (see *Cyborgs*). He's hoping that as his reputation spreads, Harman will eventually show up and challenge him.

Character Profile

Corporeal: D:3d12+2, N:2d8, S:4d12+4, Q:4d12+2, V:3d8

Climbin' 4d8, dodge 5d8, fightin': brawlin', knife 6d8, quick draw 5d12, shootin': pistol, rifle, machine-gun 6d12+2, sneak 4d8, speed-load 5d12+2

Mental: C:3d8, K:2d6, M:2d8, Sm:3d6, Sp:4d8

Bluff 3d6, guts 4d8, overawe 5d8, ridicule 4d6, search 4d8, scroungin' 4d6, scrutinize 5d8

Edges: Level-headed, two-fisted

Hindrances: Bloodthirsty -2, grim servant o' death -5

Pace: 8

Size: 6

Wind: 16

Special Abilities:
Harrowed

Cyberware (Drain 6 of 10): Cyber eye (laser sight, light enhancement), endo-armor (torso only), reflex booster, Samson, SRU, 2 storage canisters (one in each leg, these hold his pistols), targeting computer

Gear: Infantry battlesuit, 2 M2011As, 2 full clips for each gun. One gun is loaded with .60 Magnum frangible rounds (3d8+6 damage), the other is loaded with .60 Magnum AP4 rounds.

Description: Sarge appears as a nondescript male in his mid-thirties.

The JLA

The JLA is on the level. If your heroes access the database, pull a card for each criminal they research. Only a small number of criminals (compared to the total number of raiders and marauders there are in the Wasted West) have been entered into the computer, so the posse only gets useful information when a face card is drawn. The amount and accuracy of this info is up to you, Marshal. On a Joker, the information is highly inaccurate.

Near Ogden

There is nothing particularly odd going on here. The missing people simply fell prey to many of the usual dangers associated with passing through a maelstrom into a Deadlands.

Kennicot Mine

The Kennicot Mine was cursed by an Indian shaman many decades before the Last War. Stalking Wolf felt the open cut mine was an affront to the nature spirits and called down a powerful curse upon it. Everyone at the mine site, and everyone who actually works at the mine, even if they leave the place, is afflicted with the *bad luck* Hindrance. This curse can only be ended by another Indian shaman or a hero with *arcane background: blessed.*

The Sky Pirates

Bo's history of the Sky Pirates was pretty accurate, but he couldn't tell you what he didn't know.

Nocturne Field

Dwight Price, aka Raptor, was a Major in the US Air Force. Shortly before Judgment Day he was assigned to Nocturne Field, a secret Air Force base that had been literally carved into the side of a mountain. The base had been carved from the inside out by automated digging machines which had tunneled to the site from southern Wyoming, so the Southern Alliance had no idea that it existed. The base was to become active in October of 2081, but the bombs fell before that happened.

Price was at Nocturne Field on Judgment Day as part of a small advance team that was to prep the base for incoming personnel. After the bombs dropped, some of the advance team left the base to make their way home, or to simply see what the world had become, but Price and a few others remained at the field. Price occasionally scouted the surrounding area with one of the base's aircraft.

While on these scouting missions, Price learned of both the Combine threat to Junkyard and the existence of the Sky Pirates. When the gang returned to the Rockies, Price decided to try to gain control of it—you know how that went. Once the major was satisfied he could trust the Pirates who remained after his purges, he led the group back to Nocturne Field.

Surprise!

The reason Price wanted the Sky Pirates was because he has a surprise for Throckmorton. A surprise he needs some experienced pilots to deliver. Nocturne Field was almost fully stocked when the bombs dropped. Supplies, munitions, and even aircraft had been shuttled to the base via an underground railroad. The base has a few million gallons of aviation fuel in sealed tanks, a supply of missiles and guided munitions, and nearly two entire squadrons of the new F-40 Tigersharks. Price has spent the last few years training his pilots how to fly these aircraft on the base's flight simulators. When Throckmorton does finally make his move, he's in for a rude awakening.

Hide-and-Seek

That's provided, of course, that the Combine doesn't find the location of the Sky Pirates' base and launch a pre-emptive strike against it. To prevent this, most of the Sky Pirates' patrols still operate out of their old airfield, 20 miles away. Price has also moved most of the base's SAM defenses to an area well north of Nocturne Field. He hopes that if they shoot down enough Combine patrols in that area, Throckmorton will become convinced that the base is located to the north. Meanwhile, Combine scouts who approach Nocturne Field are allowed to pass unharmed.

Missing Patrols

Not all of the Sky Pirate's missing patrols ran afoul of the Combine. One of the squadron's early victims was a witch. She lived through the Pirates' attack and has summoned up an avenging spirit to get some payback.

Profile: Avenging "Angel"

Corporeal: D:3d8, N:3d8, S:3d12, Q:2d10, V:4d6
Fightin': scythe 4d8
Mental: C:2d8, K:2d6, M:3d10, Sm:2d6, Sp:3d12
Search 3d8, trackin' 4d8
Pace: 366 (150 mph)
Size: 8
Wind: –
Terror: 9
Special Abilities:
  Damage: Scythe (STR+2d10). This weapon is spiritual in nature and ignores all armor and cover.
  Immunity: Normal weapons
  Flight: Pace 366 (150 mph)

Marshal

Description: The creature appears as a winged, hooded figure, carrying a scythe.

Updates

We've got a few rules changes and clarifications to cover. Quite a few deal with making things go boom.

Explosions

We've decided to standardize the way explosions work in the Weird West and Wasted West. The rules for explosions in the Weird West remain unchanged. Explosions in *Hell on Earth* now use the same system. Instead of losing a die of damage for each Burst Radius crossed, explosive damage is now reduced by a die type for each Burst Radius crossed. A 4d10 explosion with a Burst Radius of 5 yards, for instance, would do 4d10 damage within 5 yards, 4d8 between 5 and 10 yards, 4d6 between 10 and 15 yards, 4d4 damage between 15 and 20, and no damage beyond 20 yards.

Massive Damage

You Marshals out there should be happy to see this. No longer will your posse be able to drop grenades at their feet, ride out the blast with a chip or two, and devastate all your lovingly created abominations. The current massive damage rules make explosions a bit wimpy, so we decided to modify them some.

Attacks and other events, like falling, that cause massive damage, now inflict their full damage to 1d6 hit locations. It is possible for the attack to inflict its damage to the same location more than once.

In the case of explosions, the number of hit locations affected are reduced by 1 for each burst radius crossed. An explosion with a burst radius of 5 yards, for example, would affect 1d6 locations within 5 yards, 1d6-1 locations between 5 and 10 yards, 1d6-2 locations between 10 and 15 yards, and so on. It is possible for an explosion to affect zero areas—your brainer just got lucky!

Armor

Since damage is now applied to specific hit locations, armor works normally against massive damage, i.e. positive AVs lower the die type and negative AVs subtract from the damage.

The Ammo Power

We're also making some changes to the junker *ammo* power. Although the current system works for building small explosive charges, it also allowed techno-mages to create pocket-sized bunker busters.

The procedure for making non-explosive ammo using this power remains unchanged. When making explosive charges however, things are a bit different:

Burst Radius

Radius	Full Arc	60° Arc	120° Arc	180° Arc
1 yard	-50%	-80%	-70%	-60%
5 yards	-25%	-50%	-40%	-30%
10 yards	0	-30%	-20%	-10%
15 yards	+50%	+25%	+30%	+40%
20 yards	+100%	+50%	+60%	+75%

The first change is in the way the warhead's effective dice are figured. Decide the damage level you want for your boom-maker, and then figure the number of dice used to compute the ammo size by summing each die level. A 4d10 bomb, for instance, would have an effective size of 10 dice (1+2+3+4=10), and an ammo size of 4 (10 x 0.4).

Just to keep the math simple, we've prepared a table of effective die sizes for warheads of up to 20 dice (the maximum size allowed by the power). Check out the Warhead Dice Table for details.

Warhead Dice

Damage Dice	Effective Dice
1	1
2	3
3	6
4	10
5	15
6	21
7	28
8	36
9	45
10	55
11	66
12	78
13	91
14	105
15	120
16	136
17	153
18	171
19	190
20	210

The second change is in the modifiers to the ammo size due to burst radius. These changes are summarized in the new Burst Radius Table.

Warheads which do not need propellant (bombs, thrown grenades, etc.), still have their sizes reduced by 50%.

The Sensor Power

Last, but not least, we've made some changes to the *sensor* power. The slot requirements for adding die ratings to a sensor have been reduced slightly. This should make it easier to make small, passive sensors. However, the size modifier for range is now applied to the entire sensor, i.e. base sensor plus die rating, rather than to just the basic sensor as before. The rating sizes can be found in the new Sensor Rating Table.

Sensor Rating

Die Type	Slots/Die
d4	0.25
d6	0.5
d8	1
d10	2
d12	4
d20	8

Cyber Mounts

Some of the numbers on the Cyber Mount Table on page 83 of *Cyborgs* are incorrect. The corrected table is listed below. The numbers on this table show the number of available mount locations after subtracting for mandatory equipment like spirit fetters and SRUs.

Also, just as a clarification, the "Replacement" column refers to a body part that has been replaced with a cyber version, i.e. cyber arm, cyber leg, etc.

Mounts

Location	Natural	Replacement
Head	4	6
Torso	6	8
Arms	6	8
Legs	6	8

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